









A  
TREATISE  
ON  
PRIMITIVE OR SECONDARY DISGUISED OR MISPLACED  
F E V E R ,  
AS  
A S I N G L E D I S E A S E ;  
WITH THE  
VARIETIES, CAUSE, AND TREATMENT,  
AS IT APPEARS  
IN MOST OF THE PARTICULAR FORMS OF FEVER  
RECOGNIZED BY NOSOLOGISTS.

BY M. E. SAWYER, M. D.

" Thus a mighty monarch to have belevelled,  
" Were you drunk or mad, sir, or bedeviled."—PETER PINDAR.

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## P R E F A C E .

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According to those novel writers who claim to form the taste of the reading world, a preface may be either grave and serious or light and airy. It may treat of many things without particularizing any. It may be any thing or nothing, and while prefixed to a particular work will serve just as well for any other. This liberty neither pleases nor disgusts their readers, because the authors give them leave either to read over the introduction or to dip at once into the history where they expect more interest. In an attempt to publish a book on a less popular subject more respect is due to public feelings than to usher into the world a stranger with so little ceremony. It will be at least due to the public to state some leading traits in the character of the new guest who is seeking their acquaintance, asking their hospitality, and soliciting a kindly reception. A minute history will not be expected; that is only to be

acquired by a sojourn together, when the stranger may expect such civilities and not more than his merits may claim. A synopsis of the work is all the author proposes, and that he fears will not secure an unexpected stranger a hearty welcome to the great number with which he is desirous of making him acquainted.

The numerous publications on *fevers*, of various names, climates, and seasons, have so loaded the medical libraries with definitions, characteristic marks, and indications of cures and deaths, that few young physicians have memories sufficiently strong to enable them to decide to what particular order, class, genus, and species, the fever may belong which they are called on to cure. Such, at least, was the memory of the author : he found it inconvenient to carry about him a system, or to read, in presence of his patient, to find out a particular name for his fever ; he found, too, that when he could clearly recollect the name of the fever and the indications of cure as suggested by the best writers, if he pursued those indications fully out in practice he must be left with the melancholy reflection of losing his patient, and of failing to obtain that reputation which is the chief desideratum of every young

practitioner. The first case which placed the author in such a dilemma was one of pleurisy, (pleuritis,) a term, according to the best arranged systems, denoting inflammatory fever, with pain in the breast. He stopped short here of pushing those remedies which had been recommended as the only proper ones to cure the disease ; he thought that, however well the symptoms accorded generally with those represented as constituting pleuritis, there was a certain something wanting to justify the indications by which a cure was to be established. He accordingly avoided the remedies, or at least avoided pushing them to that extent recommended ; he took a new course, and, against the advice of the learned, saved his patient, and avoided those melancholy reflections which must have resulted from a different course. Subsequent practice has taught him that the same error exists in all the fevers which Dr. Cullen and other respectable writers have made to terminate in "itis," thereby to distinguish alike the locality of the fevers and their inflammatory character, and has satisfied him that such is not only frequently erroneous, but that every fever of Dr. Cullen's nosology, where he teaches his students to believe that this local

affection is always inflammatory, is sometimes typhoid and typhus. This opinion was greatly sustained by cases the successful treatment of which, by Dr. John Clark, satisfied the writer that they were typhus, and he has now seen so many cases to confirm his first impressions, that they exist without a doubt.

To establish this truth by a relation of some of his own experience, with the occasional incidental facts and observations of some of the older writers which seem to be becoming obsolete, and to excite in others an inquiry after truth,—how much soever it may be opposed to the opinions of those who are now considered as standards in the profession,—is the chief design which the author now has in obtruding his notions on primitive fever on the public.

There are few physicians of long practice who have not, at least, thought they had discovered some new principles in medicine, and still fewer who did not believe they had improved, on scientific principles, the cure of more than one disease. The author himself, while he disclaims all pretensions to originality of the thought, has believed that a disease so frequent as gout (or, as it is more popularly called, the rheumatism,) could not

have occurred so often in his practice without its existence depending on some "evident external exciting cause." He was irresistibly led to seek that cause, and in finding it, as he believes he has, to be the same which produces the fever of summer, or autumn, he was compelled to place this disease, as well as phlegmasia dolens and jaundice, among that class of diseases known as disguised or misplaced intermittents. In doing this he has intended no disparagement to the importance of the gout, or the many honourable patients it may claim as its victims; he could not, as he supposed, place either of those complaints among primary fevers, yet a fever is produced from pain or irritation, hence he has chosen to call it secondary or symptomatic fever. If he shall have sustained this position by the facts and reasoning which he has adduced in their support; if the knowledge of the cause should point to a more sure preventive than any heretofore offered to the consideration of the public; and if the true nature and character of the disease should lead to a more rational and less uncertain cure,—he is not without the hope that his endeavours to lessen the miseries of thousands of his fellow beings will be regarded as a proof of his good will to-

wards them; while, on the contrary, should the doctrine here inculcated be regarded as not entitled to public confidence, he may be pleased with the reflection that he has left both the disease, and those who continued to suffer by it, in a situation at least not worse than he found them.

The author would be wanting in truth were he not to acknowledge that he possesses neither talents, leisure, nor industry, to have given to the treatise the elegance, extension, or completion, which the importance of the subject required; he begs it to be regarded (as he is sure it will) as a mere sketch or outline, and one which he has scarcely a hope of being perspicuously written, one chief design in the composition being to avoid technicalities, that it might be read by others as well as his medical brethren, without disgust. He hopes the professor will not view this attempt to simplify the nature of primitive fever, or to place the gout among the misplaced intermittents, as any encroachment on the right of his college; the author has not himself the vanity to believe it will ever be used as a text book to those students to whom it may be the professor's province to furnish better. He does not aspire to the elevated rank of him of the

chair ; he has not invaded or attempted to invade any thing, as far as he knows, of others ; he claims the indulgence of him who acknowledges no equal without a professorship, and begs him to recollect that while he, like the eagle, soars above his species, like that noble bird he should “suffer little birds to sing.”

To the elder brother of the profession,—he who has obtained eminence in his profession without losing his sense of equality,—it is hoped the work will not prove uninteresting ; he will find here the foundation of that fame simply portrayed in the enlarged views and independent course of his own life. He may find, too, some consolation in that course which may have subjected him to the reproaches of empyricism, by the ignorant, for the steady and even tenor of his own way.

To the young physician, and he who is about to leave college and engage in the war arising from the various doctrines he may have been taught, the author can, with propriety, say nothing. The estimation in which he should hold the work must depend on those from whom he receives instruction. If they should condescend to speak of it at all, in their opinion the author will, as in duty bound, acquiesce.

To his southern friend the planter, and he particularly who lives remotely from a physician ; he who has a large family dependent on him for necessities in health and comforts in sickness ; he who prescribes in sudden emergencies and in all slight cases of disease ; he who has a natural tact for pulse-feeling, which none other can acquire, — the author confidently recommends this book as a work calculated to increase his knowledge of morbid physiognomy and of the pulse, to increase his confidence in a prescription which has been properly given, and to enable him to correct one which has been given without due consideration, and, finally, to persist in one which has done no harm, but seems to have done good, until, by experience, he acquires that confidence in himself which modest men seldom possess in the exercise of that profession to which they have not been bred. To him, as well as to the young physician, he would say, in the language of Dr. Rush, “ It is agreeable in medical researches to be under the direction of principles ; they render unnecessary, in many instances, the slow and expensive operations of experience, and thus multiply knowledge by lessening labour. The science of navigation has rested on this foundation since

the discovery of the loadstone. A mariner who has navigated a ship to one distant port is capable of conducting her to every other port on the globe. In like manner the physician who can cure one disease by a knowledge of its principles, may, by the same means, cure all the diseases of the human body, for their causes are the same. Judgment is required only in accommodating the force of the remedies to the force of each disease. The difference in diseases, which arises from their seats, from age, sex, habit, season, and climate, may be known in a short time, and is in the compass of very moderate talents."

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# A TREATISE

ON

## PRIMITIVE AND SECONDARY DISGUISED OR MISPLACED FEVER.

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### CHAPTER I.

#### DESCRIPTION OF FEVER.

AMONG the many diseases to which the human race is subject, there is not one so frequent, not one so distressing, nor are all others together so destructive, as fever. While no age, no sex, no climate, nor any condition of life, can claim an exemption from this malignant adversary, it cannot be regarded as a subject undeserving the most attentive consideration of the faculty, each member of which is in duty bound to contribute his mite to add to the knowledge already in possession of the world, whatever he may have acquired new or valuable in practice, by his own experience; so that the result may tend to simplify the present arrangement, and eventually lead to a more perfect and systematic treatment.

In the definitions of fever, although as various as the multitudinous productions which a subject of such vital importance was calculated to afford, none have yet appeared which seem to have satisfied the public, none which seem to have satisfied fully the authors themselves. Indeed, so anomalous is the disease itself, and so various in its appearance, that, while it may be easily distinguished from every other disease, it cannot in a few words be aptly portrayed.

From the etymology of the word *febris*, (from *fervio* to be hot) its essence has been made to consist in heat ; yet this is not always characteristic of the disease, for the temperature of the skin is frequently natural and even sometimes cold.\* Quick pulse, also, is made to enter into the definition of all authors ; yet the pulse is occasionally preternaturally slow.† Preceding *horror*‡ is made a characteristic distinction with some authors ; yet such a symptom is often wanting.

Among the innumerable blunders and mistakes which have been too justly charged to the faculty, in no one instance has error been ascribed to our mistaking fever. It would be,

\* Sydenham. † Idem. ‡ Cullen.

therefore, an useless waste of time to examine the many definitions of this Proteus-like disease. Since it seems that every physician has been able to distinguish it from every other disease. I have little hope, myself, of satisfying my readers in the definition of fever, more than those who have preceded me. It will, however, at once be conceded that the blood vessels are the system principally and primarily diseased. I shall therefore define fever an irregular or morbid action of the sanguineous system, general disorder of the whole animal functions, and weakness of the muscles.

I prefer this morbid action of the blood vessels to Dr. Cullen's increased frequency of the pulse, because it has already been stated the pulse is not always increased in frequency. But, admitting such was the fact, it is not always a true indication of fever, since a frequent pulse is always created by running or any other violent exercise, and yet the pulse is not irregular, nor can the subject of it be said to have a fever.

In order to supply any deficiency in the definition of fever, and for the better elucidation of the subject, I will subjoin a short description of a paroxysm of a fever, from Dr. Cullen, with

such additions of my own as will embrace the nature of the complaint generally.

“In fever” he says, “the person is first affected with a sense of languor or debility, a sluggishness in motion, and some uneasiness in exerting it, with frequent yawning and stretching. At the same time the face and extremities become pale ; the features shrink ; the bulk of every external is diminished, and the skin over the whole body becomes constricted, as if cold had been applied to it. At the coming on of these symptoms, some coldness of the extremities, although not taken notice of by the patient, may be perceived by another person. At length the patient himself feels a sensation of cold, commencing first in his back, but from thence passing over his whole body. And now his skin feels warm to another person. The patient’s sense of cold increasing, produces a tremor in all his limbs, with frequent succession of rigors in the trunk of his body. When his sense of cold and its effects have continued for some time, they become less violent, and are alternated with warm flushings. By degrees the cold goes off entirely, and a heat, generally greater than natural, prevails over the whole body. With this heat the colour of the skin returns, and a pre-

ternatural redness appears, especially in the face. While the heat and redness come on, the skin is relaxed and smoothed, but for some time continues dry.

“The features of the face and other parts of the body resume their natural size, and become even more turgid. When the heat, redness, and turgescence have increased for some time, a mixture appears upon the forehead and by degrees becomes a sweat, which gradually extends downwards over the whole body. As the sweat continues to flow, the heat of the body abates. The sweat after continuing some time gradually ceases, the body returns to its usual temperature, and most of the functions are restored to their ordinary state.”

This description of fever, intended by the doctor to represent an ordinary paroxysm of intermittent, is extremely accurate as far as it goes, and is well calculated to inform the patient himself, or the bystanders, that the case is really a fever. It is not, however, such a description as would satisfy a young physician, or enable him, if called on, to relieve it. No notice is taken of the “horror ;” none of the “increased frequency of the pulse ;” and, what is yet more important,

no symptom detailed points to the state of excitement, or the true method of cure.

I would therefore add that the pulse is always morbid or irregular, increased generally in frequency ; but that it is occasionally preternaturally slow, accompanied sometimes with an increased inflammatory action ; sometimes with a mixed or typhoid action ; and sometimes with a weaker action than is natural in health, distinguished by the name of Typhus state of excitement. In all these grades of action (as before stated) the pulse is morbid or irregular. The breathing, like the pulse, is hurried, difficult, or laborious. The patient is restless early in the attack, and complains of great thirst ; and these symptoms are more or less distressing during the continuance of the fever ; which is not always confined to a single day, but runs on with occasional remissions in some of those symptoms, and, where they are not so violent as to produce death, sometimes for weeks ; producing in some cases effusions of water in the cellular membrane, or in one or more of the cavities of the body ; and then it is called the "Hydrophic state of fever."\*

Another form of fever is marked sooner or later with eruptions on the face and throat, which

\* Rush.

are sometimes ulcerated. This is called Small-pox, Scarlet Fever, Measles, or "the eruptive state of fever."\*

While another form of fever may have superadded to the symptoms above enumerated, copious liquid discharges from the bowels called diarrhœa. While cholera is characterised with frequent vomitings of billious matter from the stomach, and discharges of the same kind from the bowels. While the febris Introversa of Sydenham, or Disentery of other authors, is attended with frequent painful and ineffectual attempts to discharge the contents of the intestines.

In other forms of fever the patient complains, early in the disease, of flying pains in different parts of his body, which soon become fixed in the head, the throat, the breast, the side, or in some one of the organs, constituting but another symptom in fever, but forming the very numerous class of Phlegmatic by Cullen, and such as are made by him and Dr. Good to terminate in *etis*, as Phrenetis, Pleuretis, &c. ; designating according to this beautiful, but (as will be attempted to be shown) erroneous system, not only the locality of the disease, but, from the etymo-

\* Rush.

logy of the word, that every species of fever with local pain is inflammatory.

Besides fever developing itself by an immediate display of morbid excitement in the blood vessels, it occurs frequently in a shape more ambiguous. It has been known and distinguished, by various authors, as disguised or misplaced fevers, and several diseases are already so classed, and generally received in the medical world. To the number already admitted, I beg leave to propose for admission three others, and hope to show they will be entitled to be so classed, and to be subject to the same rules.

The disguised or misplaced fever, according to a supposition of Dr. Rush, happens where the infection appears to pass the arterial system, and to fix upon other parts of the body.

The three which I propose to add are Phlegmasia Dolens, Jaundice, and, though last not least, the Gout or Rheumatism.

May not Epilepsy be added to this class of disease?

It is a well known fact that persons subject to Epilepsy, seldom have intermittent or remittent fevers. If they by chance have them, or any fever of miasmatic origin, the Epilepsy is suspended.

May not the miasmata, in such cases, pass the arterial system and fix on the nervous system, so as to produce the phenomena in this disease? The disease is certainly incurable in a miasmatic district, by any one, or by all the various remedies which have been advised.

The complaint generally leaves the person subject to it, according to the observations of Dr. Heberden, at the age of forty. This is about the age in which the system becomes insensible to the operations of miasmata in producing intermittents and remittents. An Epileptic patient, under my care, parted with that disease about that period of his life, and has been subject to moderate attacks of gout ever since.

Would not the removal of an Epileptic patient from a miasmatic district to one where miasma had no existence, produce a cure? Does the disease exist in countries where Summer fevers are absent?

I have heard of one well attested fact of an Epileptic negro in the Eastern part of Virginia, whose removal to the Western part of the same State, and of his residence there, being followed by an immediate and permanent cure of the disease.

## CHAPTER II.

## DIVISION AND CAUSE OF FEVER.

It will be observed by the intelligent reader that the protracted, tedious, and, I fear, tiresome, description of fever, in the first chapter, is intended to embrace all the orders, genera, and species of that disease, as recorded by the most systematic or nosological writers. He may have anticipated also that this sweeping description of that disease is to be followed by the declaration that *there is but one fever*.

While it is my purpose to confine all the observations which may be found in this treatise to fever, as a single disease, I am aware that I do it at the risk of offending all the nosological writers of the present day, most of whom have divided fever into continued, intermittent, and remittent : to which some have added putrid. These have they again subdivided under appropriate names, into orders, classes, genera, and species, so as in the end to produce at least three hundred varieties. None of which can I follow, because this minute division of fever, while it serves to overburthen the memory, has no bear-

ing on the cause, is not calculated to shew the state of the system, nor is it fitted to lead to practical results in the cure.

In order to the better understanding of the views which I entertain on this interesting subject, I shall in the first place contend that *there is but one fever* ; secondly, *but one cause of fever* ; thirdly, that this one fever has *but three varieties*, viz. : *Inflammatory, Typhoid, and Typhus* ; fourthly, that this one fever, in whatever form it may appear, or to whatever name it may be assigned in common language, whether as continued, intermittent, or remittent ; whether with or without local affection, including particularly all the Itises of Dr. Cullen, as improved by Dr. Good, must be considered as being sometimes of the first variety, Inflammatory ; sometimes of the second, Typhoid, or mixed ; and sometimes of the third variety, Typhus.

First. *There is but one fever.* In discussing this subject, I shall claim the *negative* side of the question, and as far as I may be entitled to that right, throw the onus probandi on those who contend for two or three hundred fevers. Indeed, were I to exhaust the subject as fully and fairly as I am sure I might the patience of the reader ; or, as did Mr. Lock, on his definition

of a single idea, I should end where I began, without shedding light upon it, and leave the fatigued reader to conclude that if the fact was not self-evident, it was not made the more so by argument.

To me it does appear as self-evident as that there is but one genus of man, one of horse, and one of dog, and that the variety in these different animals no more proves the existence of many kinds, than do the several varieties of fever prove there is more than one generic disease of that name. In preference, therefore, to rendering an argument on the subject, (particularly as I hold the negative of the question) I shall follow the authority of the courts, who prefer the opinion of good Judges, to the most ingenious reasoning.

Dr. Robertson (in speaking of fever) says, "I resolved to attend diligently, and to mark down minutely, every case of fever as it occurred to me in every country, climate, and season, and upon comparing them together, I have found that fever is universally one and the same disease."

John Clark (whom no physician has surpassed in point of correct observation and successful practice,) says, "every where fever is essentially

the same, or in other words, there is only one genus."

Drs. Millan and Dickenson concur in the same opinion. I would remark here that the opinion of all these physicians, from their high standing in their profession, alone, is entitled to great respect ; but what adds to the weight of their testimony is, that the three first-named gentlemen were engaged about the same time in different parts of the world, and, without any concert, had been pursuing the same plan, and published their observations about the same period, all concurring in the same opinion that there was but one fever ; and that it was to be treated very differently from what it had been by medical professors.\*

Our illustrious countryman, Dr. Rush, carried this opinion much farther. He says "there is not only but one fever, but there is but one disease, and but one sin."†

The systematic or nosological writers, themselves, admit that one fever will change into another. For instance: the intermittent may and does become remittent ; and this again becomes a continued fever ; that pleuritis frequently be-

\* Robertson on Fever.

† Rush's MSS. Lectures.

comes phrenitis or hepatitis, and the reverse ; that continued fever becomes remittent and intermittent ; and that some of these fevers, in their progress towards recovery or death, may not only change their name, but very grade of action. Hence Dr. Cullen, in his indications of cure, particularly in his class of phlegmasiæ, (all of which he makes inflammatory,) begins by directing his remedies to the moderation of reaction, and ends them by directing such as may sustain the system, and invigorate it when the reaction is too feeble.\*

Dr. Good says "all fevers have a tendency to run into each other, and many causes are perhaps common to the whole."†

Secondly. There is but one cause of fever. It has been customary for most, if not all, physicians, when writing on fever, to assign several causes as necessary by their combination and co-operation to produce fever, viz. : the remote cause ; the predisposing cause ; the occasional or exciting cause ; and, lastly, the proximate cause. As I object to the necessity of all causes except one, and believe that alone is sufficient to occasion the disease, I shall call it the exciting cause.

\* First lines.    † Vol. 2, page 66.

My chief objection to the remote and predisposing causes of authors, arises from the belief that neither of them is necessary to the production of fever ; and to the proximate cause, because between that and fever itself, there is no shade of difference.

Who can believe that the debility which is ranked by most writers as the predisposing cause of fever, has any necessary existence in a patient to insure his taking the eruptive state of fever, if exposed to the contagion of small-pox, or measles ? Or what man is there, in the best health, who would willingly expose himself to an infected district in which was prevailing yellow, billious, or intermittent fever ?

There are few physicians, I presume, who have not witnessed a healthy, active individual, contracting an intermittent or remittent fever, on a slight exposure to the miasmata of a marsh of putrifying vegetable and animal matter ; or of a healthy individual receiving an attack of winter epidemic, when exposed to the cause which produces that disease. Indeed, so well is the fact established of every person being liable to contract yellow fever, when exposed to the exciting cause alone, that it is the policy of all well regulated cities, in the United States, to

close the entrance to the infected district as soon as the fact of its locality can be ascertained.

Boerhave\* says "the cause of a disease is that which makes its present existence ; and is almost constantly some real or physical thing, corporeally present, or at least is sufficient to produce a new state or condition of the solids and fluids." Sydenham† asserts that "it is evident that if any man, in perfect health, should remove to any part of our country where an epidemic disease rages, he might in a few days be seized with it, though it is scarce creditable that any manifest alteration should be made in the same person in so short a time." The celebrated Boyle‡ very truly denies that sudden epidemic colds are to be accounted for by sudden changes in the weather.

Cleghorn, in his treatise on the diseases of Minorca, says "the summer fevers are by much the most universal ; and attack the inhabitants of every rank, whether natives or foreigners, without distinction."

Gaubious says "that only deserves the name of a physical cause, which so constitutes the disease that when present the disease exists."

\* Vol. 5, page 371. †Wallis' Sydenham, vol. 1, page 16. ‡ Vol. 5, p. 49.

Dr. Rush says that "the infection of yellow fever sometimes acts as the remote, predisposing, and exciting cause of that fever." He therefore relinquishes the necessity of any cause except one, and that is the exciting cause.

Dr. Popkin asserts that "it is of little consequence to seek the predisposing cause, when the atmospheric miasm, the occasional cause, was sufficient to infect the most healthy and robust, and even to make on them the greatest impression."\*

"The whole summer of the year 1826 was extremely dry and warm, so that there was a great scarcity of pure water ; our region being intersected with canals, presented a vast surface of stagnant water, a most prolific source of atmospheric miasm, to which *alone* many pestilential epidemics owe their origin."†

Cleghorn states, from Baglirius, that of thirty persons of the first distinction in Rome, who descended the Tyber in a boat together, twenty-nine were attacked with intermittent, and but one escaped.

Here twenty-nine out of the thirty must have been predisposed, if predisposition was necessa-

\* Medical Recorder, vol. 13, page 55. † Idem.

ry to insure an attack. It follows, therefore, that it is thirty to one against the necessity of a predisposition, since but one escaped out of the whole thirty.

I am aware that in offering the testimony of the foregoing authors to prove that it is unnecessary to retain the predisposing or remote cause of fever, their own example in the retention of those causes has not been surpassed by any physician who has either preceded or followed. Yet do I believe the facts strictly true, and consider myself entitled to all the benefits which can be derived from their exhibition.

I shall moreover reject the predisposing, remote, and proximate causes, because it is unphilosophical to retain more than is sufficient to produce the effect, and account for the phenomena.

In rejecting the necessity of these causes in fever, I beg not to be understood as sustaining a doctrine that all persons exposed to an exciting cause of fever necessarily take on the disease, or that every person exposed is equally liable to be infected. It may be readily conceived that in situations where the poisonous effluvia exists but in small quantity, it may be so diluted with common atmospheric air as to pass

the sanguineous system by secretion, without producing any inordinate action in the blood-vessels themselves.

Acclimation, too, lessons the danger of infection, because, under the well established principle in the animal economy, the system in every part of it becomes less liable to be acted on by the same morbid agents, agreeably to the length of time, and the violence to which it has been subject to their agency. Thus, for example, a child born in a southern, sickly climate, would be more apt to contract a fever than an adult long accustomed to breathe its unhealthy atmosphere. And a European, or person from the northern parts of the United States, would probably be more apt to be infected than even the child, because not at all acclimated, and less accustomed to the morbid agents.

It may be farther alleged in favor of rejecting the remote and predisposing causes of fever, that it is a well known fact that a person bitten by a poisonous reptile, stung by a poisonous insect, wounded by a poisonous arrow, or the putrid matter of a dead animal, (as happens sometimes in dissections) is thrown into fever, violent in proportion to the quantity and quality of the poisonous matter, and which not un-

frequently terminates in death ; whereas the wound of itself, unconnected with the poison, would have been disregarded, and unproductive of either fever or death.

Fever seldom exists sporadically in the district of country to which my practice has been confined. The manners and habits of the people are plain and simple, and in nothing more than in their diet and exercise ; so that I have seldom seen a fever, requiring a medical prescription, occasioned by heat succeeding cold, or by a full meal and warm room after violent or fatiguing exercise, and hardly ever from the use of strong stimulants, intense study, or violent labor overstraining the muscles and blood-vessels. Fever, when it prevails, may therefore be generally, if not always, considered epidemic, or at least endemic ; the causes which produce one case generally extending over so large a portion of the country as to produce a sufficient number of similar complaints to entitle them to be classed and considered as epidemic.

The causes which produce fever at different seasons of the year, I conceive, have not a common origin. I shall therefore follow that division which is observed by writers who term the fever which happens in the cold weather by the

common designation of the winter epidemic, while that which occurs in the warmer season is called the summer epidemic.

## CHAPTER III.

## WINTER EPIDEMIC FEVER.

I consider certain unknown particles floating in the atmosphere and generated in the bowels of the earth, by chemical agents and electric attraction and decomposition, as producing that fever in the cold season of the year which is known in the northern cities, and in England, by the appellation of the Winter Epidemic, in the southern States by the name of the Cold Plague, or Epidemic, and by most medical writers, in every part of the world, as the Influenza.

How far electricity may afford its agency in producing these results, is a subject of interesting inquiry. We know that, during the summer, or warm season of the year, this active matter delights to inhabit the atmosphere, which, at that season, being plus, and the earth minus, shews its effects often in thunder and tornadoes, while yet at a greater distance it produces only slight coruscations without noise. Does it not at the approach of cold weather forsake the atmosphere and retire to the earth, where it sometimes produces earthquakes and

volcanoes? May it not, while rushing beneath us in this violent manner, change its situation without producing always sensible vibrations in the earth; yet so powerfully and rapidly as to convert a thousand mineral veins into metals, and force these through the earth in a gaseous form? And may not these particles floating in the atmosphere produce the winter epidemic fever, which is so fatal to man, beasts, birds, and fish?

This hypothesis, I willingly admit, is not entirely new. Sydenham, and other celebrated medical writers, ascribe to this cause what Sydenham terms a general constitutional state of the atmosphere, prevailing in particular years; but they do not regard it more (as far as I have understood them) than as a predisposing cause of fever, for they have all assigned other occasional or exciting causes to produce fever.

Sydenham,\* whose powers of observation have not been surpassed by any philosopher of ancient or modern time, says "there are various general constitutions of years that owe their origin neither to heat, cold, dryness, or moisture, but depend rather on a secret and inexplicable

\* Wallis' Sydenham, vol. 1. page 8.

alteration in the bowels of the earth, whence the air becomes impregnated with such kinds of effluvia as subject the body to particular distempers, so long as that constitution prevails, which after a certain course of years declines and gives way to another."

The same author farther says, "I doubt if the disposition of the air, although it be pestilential, is of itself able to produce plague; it is conveyed by pestilential particles, or the coming of an infected person from some place where it prevails."

Seneca\* supposes that "the air inclosed in the earth becomes vitiated either by stagnation, or through the defect of fires." He thinks "this air, when forced into the atmosphere, renders it impure, generating new diseases." This opinion has been followed by Van Helmont, Van Sweiten, Hodges, and Baglivius.

"In the autumn of 1753, after a dry season, arose in Rouen a thick fog with the smell of sulphur, followed in three or four days with an epidemic fever, accompanied with chills, lassitude, loss of appetite, and slight pains in the legs and arms, followed by bilious looseness, nausea, and vomiting."†

\* Webster. † Philosophical Transactions, vol. 43. Idem, vol. 1. p. 356

Forestus\* ascribes an epidemic catarrh, or sore-throat, at Alkman, in 1557, which invaded two thousand persons, of whom two hundred died, "to a vapor ; for the disease was preceded by thick clouds of vapour of ill smell."

Seneca relates that a vapour, caused by an earthquake, in Campania, killed six hundred sheep.

Margeray informs us that the black pestilence of 1347, in China, arose from a vapour which burst from the earth with a smell the most horribly offensive.†

Mr. Noah Webster, who has embodied many valuable facts in his Treatise on Epidemical Disease, and to whose industry and extensive research I am greatly indebted, if not for the suggestion of this theory, for many cases on which I rely to support it, says "the only efficient cause within our narrow comprehension capable of extending the principle of destruction through the elements is the all-pervading element of fire or electricity."

Dr. Gallop,‡ of Vermont, who published Sketches of an Eepidemic Disease, in 1815, assigns, as an adjunct cause, to the general con-

\* Van Swieten, vol. 16, p. 11. † Boyle, vol. 5, p. 6. Webster. ‡ p. 134.

stitution of the air a gas of some kind or other. "It cannot," he says, "be assigned to any of the subterranean miasmata, as their influence is never known to extend to any considerable distance. We are therefore forced to look for it among the subterraneous exhalations. Perhaps the earth is frequently emitting from its bowels a silent vapour through water, the surface of the earth, and, in time of frost, through various channels; these vapours mix with the common air, and may for the most part be harmless, unless when connected with the general pestilential diathesis."

The doctor himself, by the by, seems not to place as much reliance on this adjunct as I think he ought; for he enumerates all other adjuncts which are known among physicians, as cold, heat, fear, grief, anxiety, fatigue, watching, wounds, bruises, burns, surfeiting, famine, all passions in excess, intoxication, debauchery, &c.

Mr. Webster\* says "it is remarkable that when the influenza appears on the American continent, it appears at sea, many leagues from the shore, and in the West Indies. It certainly

\* On Epidemics, pages 95, 96.

extends from the northern limits of the United States to Barbadoes."

"The universal catarrh appeared in the Isle of Bourbon, in the year 1733, about the same time it did in Europe."

He, as well as Mr. Boyle, denies that sudden changes in the weather produce it.

"The pestilential principle," the same author\* says, "has extended to every species of life. In the great plagues which have afflicted the human race, other animals, as horses, sheep, sometimes cats,† dogs, and fowls, together with the fish in rivers, and in the ocean, and even vegetables, have born their share in the calamity."

"The death of fish in rivers, and in the ocean, is one of the strongest arguments to prove the cause of pestilence to be a subtile vapour, expelled or exhaled from subterranean regions. That fish do die of epidemic diseases, is a fact, as well authenticated and ascertained as that these diseases affect the human race ; and it is equally certain that such mortality among the fish is usually contemporary with pestilence among men on the adjacent shore."‡

\* V. 2, p. 153. † See also Rush. ‡ Webster on epidemic diseases, v. 2, p. 163.

Dr. Rush,\* in enumerating the causes of fever, mentions the matter discharged by earthquakes. He says, "after earthquakes, the air has been observed to be extremely disagreeable ; especially after one that happened in Jamaica, June 17th, 1692. Three thousand persons died soon after this earthquake."

The same author mentions sulphur, in a gaseous state, as a cause of fever, and says, "in Charleston, when the burning of coal was first introduced, the inhabitants were all immediately affected with cough."

It will not be disputed, at this day, that there are many mineral substances, and many acid gasses, which, on being respired, produce fever. The vapour of lead and quicksilver produce colic and paralysis. The fumes of quicksilver, when produced by heat or friction, cause, when respired, fever, with salivation. The fumes of arsenic, the nitrous oxide,† æther, and alcohol, in a gaseous state, produce the same disease.

Sydenham‡ states that "a severe frost happened in the beginning of the winter of 1664, which abated not until the middle of March, and was then followed by a pestilential fever."

\* MSS. Lectures on Fever. † See Silliman's Journal

‡ Wallis' Sydenham, vol. 2, page 315.

This fact goes to shew that while the pores of the earth were closed by the frost, no pestiferous gas could escape ; but as soon as the thaw unchained the gas, pestilential fever followed.

During a long practice in North Carolina, I have never known the influenza, or winter epidemic, to occur in the *warm season* of the year, except twice ; once in 1807, and the second time in 1828. In the first of these years, Dr. Gallop (in his *Sketches of Epidemics*) states there was an earthquake. And, in 1828, there was a severe earthquake at Lima and Caraccas, in South America ; and one in Providence, Rhode Island, in the summer preceding the appearance of the fever in the fall ; for both epidemics commenced here in October, although Dr. Gallop states that the one of which he speaks (in 1807) commenced in August, and seemed to come from the South.

I wish to be distinctly understood as charging emanations from the bowels of the earth, as the *sole cause* of producing influenza, or that fever known generally as the winter epidemic. This is a cause which seeks not the aid of a remote or predisposing cause, nor the aid of any constitutional state of the atmosphere, except such as those emanations themselves produce.

To conclude, therefore, this division of the subject : If it is admitted that the electric fluid produces earthquakes and volcanoes ;\* if it is admitted that this fluid may change its situation without producing vibrations in the earth ; yet at the same time, so powerfully and rapidly to change its locality, as to convert a thousand mineral veins into metals, and to create a like number of chemical decompositions ; if it is admitted that the gaseous state of these metals and chemical decompositions are forced through the pores of the earth, and the waters of rivers, and of the ocean, when these pores are not closed by frost ; if the above facts prove that mineral and chemical substances, in a gaseous form, produce fever ; if they prove that the inhabitants of cities and of countries—as well as other animals, and fish in the adjacent rivers and seas—have been destroyed by vapours arising after earthquakes, and possessing smells that are “horribly offensive ;” if they prove, moreover, that neither heat nor cold, dryness nor moisture, exerts any influence in generating pestilential fever ; does it not naturally and irresistibly follow that there is no other cause, with which

See Nicholson's Nat. Philos.

we are acquainted, possessing the power of such vast extension as to infect, nearly at the same time, the animal creation of the whole world, as well of the water as of the land, with fever and death, as poisonous emanations from the bowels of the earth, and generated from the powerful agency of the *electric matter*.

## CHAPTER IV.

## SUMMER EPIDEMIC FEVER.

The exciting cause of the fever appearing and prevailing in the warm season of the year, similar to the cause which I have charged with the production of the winter epidemic, is ascribable to certain deleterious particles floating in the atmosphere, but deriving their origin from a different source. It has been fashionable, among the late Italian writers, to call the substance *Malaria* ; this is quite a pretty word, and (as far as I understand it) means ill or sickening air. I however object to its use, because it would seem, as the word implies, that the air produced the malady ; whereas, in my opinion, the particles which float in the air, no more constitute any part of it than does the dirt or animalculæ, which happen to float in water, constitute any of the elements of that fluid.

Although there is no material difference among physicians as to the matter which occasions the fever of the warm season, yet it remains a source of infinite regret, if not of odium, that chemistry, with all its just and boasted ce-

lebrity for improvement in the arts and sciences of the present day, has left us as completely in the dark as to the exact nature and component parts of these unknown, fever-producing particles in the atmosphere, as were the ancients, who believed that water, fire, air, and earth, were the four only primitive elements, and that the whole universe was composed of certain parts of each of them.

The cause of all fever, during the warm season of the year, admits now of no dispute of importance, in the United States. The doctrine of its contagious nature is exploded, at least in the country; however inveterately that opinion may be sustained in Europe. Now and then, to be sure, we see a feeble essay here, purporting to make Typhus and Scarlatina contagious; but the question seems to have been so fully, so ably, and so satisfactorily discussed and settled by Mr. Webster, in his Treatise on Epidemic Diseases, and by the numerous spirited and well written essays in the New-York Medical Repository, that no person now thinks it worth his while to refute those notions, and no one can account for the pertinacity with which the opinion is held in Europe, except from the belief that no one there "ever reads an American book."

Low situations, abounding with marshes and stagnant water, in which the produce of the soil, with myriads of insects, larvæ, and animalculæ are undergoing death and putrefaction, occasioned by the heat and peculiar quantity of moisture in which they are enveloped and decomposed, infect the surrounding atmosphere with such elementary principles as may have been developed by their respective decompositions. These particles, whatever they may be, and of which it has been already said we have not improved in knowledge, are known and admitted by all physicians to be capable of producing fever.

The relative quantity of animal and vegetable matter forming the basis of this miasmata, or effluvia from marshes, does not always exist in the same proportion. They are greatly controlled by soil, temperature, and moisture. I mention this fact now, for the purpose of impressing it on the mind of the reader, as it is my intention hereafter, and in proper time, to show that the effluvia from decaying vegetables alone, or where the quantity from that source greatly preponderates that portion deriving its origin from animal decomposition, has much influence in determining the variety of fever to which it gives existence. So, on the contrary, I wish

to show that where the effluvia is derived from the decomposition of animal matter, the effect which that circumstance has in controlling the variety of fever of which it is the cause.

Thus, in a long hot season, with plenty of continued moisture, the abundance of vegetation keeps pace with the deposit of insects, larvæ, frogs, and fish, to which it affords protection. The season, however, continuing favourable to both, the animals pass through their several stages of existence, and take their departure in due season, without leaving much to be decomposed in autumn. But the vegetable matter being immovably fixed to the soil, perishes and fills the air with its effluvia ; and, with but little assistance from the animal progeny, generates disease in the neighbourhood.

On the contrary, in dry seasons, the vegetable matter, while it is much less abundant, will not decompose, for want of a due quantity of moisture. When, therefore, it ceases to grow, it becomes dry without decomposition, and emits but little miasmata. Not so with its animal companions ; they obtain no maturity without continued moisture ; without this they die ; but having within the constituent parts of their bodies a sufficient quantity of moisture to carry

on the process of putrefaction, they become decomposed, and march alone, or nearly so, with their myriads of animal miasms, to make a war of pestilence on their neighbours of the human race.

Thus, then, it would appear that while we must naturally conclude that miasmata, or the effluvia from marshes, mill-ponds, and stagnant water of every description, is composed of vegetable as well as animal matter, and which Dr. Rush believed the true cause of the summer or autumnal fever, it is yet evident that they cannot exist always in the same relative quantities.

Analogous to the effluvia arising from the putrefaction of animalculæ deposited amongst vegetables, and decomposing before they attain full growth and maturity, is that putrid animal gas which is generated in crowded, dirty, and ill-ventilated apartments,—as jails, hospitals, camps, ships, the crowded hovels of the poor in all the large cities in the world, and in many of the negro cabins in the Southern States,—adhering to the walls, bedding and furniture of the houses, and producing epidemical, or rather endemical, fevers to the inmates of the dwellings as well as those who visit them, and always

that species of fever to be hereafter designated as typhus, and which they yet hold in Europe to be contagious.

In rejecting the predisposing, remote, and proximate causes of fever, and retaining none but the exciting cause, or that which evidently occasions the disease, I feel that I have the opinion and weight of authority of the whole medical world against me. The feeble force which I can of myself oppose to so much power, would be but as the resistance of a feather to a tornado. I trust, however, that physicians will regard this attempt at innovation with candour, and with calmness; particularly when they observe that I have a great majority of the people on my side, whose good and common sense have ever taught them that there is but one cause necessary to produce fever; and when, too, they see me surrounded by my new friends and allies, heat, cold, moisture and dryness, great personages, who have long been charged with bringing pestilence and death on the human race, but who, after a full view and hearing of the case, I have pronounced innocent of the charge.

Heat, cold, moisture, and dryness, have been ranked, by all medical writers, as being, se-

parately, or when acting in concert, the chief causes of fever. In favour of their innocence I have already recorded the testimony of at least one most respectable witness.

First. Heat, although a strong stimulant and possessing the power of rarefying the blood as well as of increasing the circulation, does not therefore produce fever; for in this case the arterial excitement is not morbid, the pulse is not irregular. It is, besides, a well established fact that the human species can bear a temperature of one hundred and eighty degrees of Farenheit's thermometer, a degree of heat almost double the natural temperature of a healthy body, and that, too, for a considerable time, without producing fever. And it is a fact equally well known that the Arabs who traverse the sandy deserts of Arabia, where, perhaps, the heat and dryness are more intense than in any part of the habitable globe, live not only free from fever, but attain greater longevity than falls to the lot of man in the most civilized country. So remarkably free from fever is this trackless desert, that a fat, full-fleshed European or American may be made to traverse the sands for months, nay, years, without fever. It is true he may lose his flesh and his strength, but yet

he has no fever.\* This may serve to shew that neither heat nor dryness is to be charged to the account of fever.

Secondly. Cold of itself never can produce fever; its action is directly the reverse of fever, and is held a valuable auxiliary to remove it. Its operation, when intense and long continued, is to produce ague, to paralyze the heart and arteries, and to stop the circulation in death. It cannot operate at the same time, and in conjunction with heat, because they are but relative terms, and one only exists in the absence of the other.

Heat and cold cannot produce fever by operating alternately, because to admit the contrary of this opinion is to exterminate the inhabitants of the vast Russian empire, who, it is known,—if their historian, Took, is to be credited,—are in the constant practice of alternating the hot bath with rolling in the snow. Yet we have not learned that these acts produce fever or other disease.

Thirdly. If moisture was a cause of fever, the Hollanders, the inhabitants of London, the citizens of the sea-coast of North Carolina, and

\* Riley's Narrative. See also the Travels of Denham and Clapperton.

the residents on the Potomac and other rivers in the United States, who are enveloped with dense fogs of moisture a great part of every winter, would never be exempt from fever during such seasons; yet we have never heard them charge the fogs with producing that disease, any more than we have heard the French, who sleep in wet sheets, ascribe fever to damp bed linen.

Fourthly. If what has been above related concerning the dry air, in the deserts of Arabia, should be deemed insufficient to absolve dryness as a cause of fever, it is hoped that the fact, which is well known and universally admitted to be true, that the dryer the air the more elastic and better fitted such air is for respiration, and the vigour and strength it imparts to the whole body will be conclusive that this quality of air should be held entirely innocent, and discharged as being not at all conducive to ill health.

## CHAPTER V.

ON THE DISTANCE THE CAUSE OF FEVER MAY OPERATE.

Of the gas producing the influenza, or winter epidemic, an opinion (although a vulgar and common one) has prevailed that it was generated in the northern parts of the United States. The opinion most probably originated from the common observation that the disease was known to have existence there earlier in each season than with us, and gradually extended south, becoming as it approached a higher temperature less violent; and ceasing to be malignant before it reached our southern boundary. This idea is surely erroneous; for it cannot be admitted, for a moment, that a poisonous gas could retain its position on the surface of the earth, and be wafted hundreds of miles without becoming in its course so diluted with atmospheric air as to be perfectly harmless. I have always observed, too, that the winter epidemic, without any difference in the peculiarity of the soil or other circumstances, was apt to be much more violent in some particular neighbourhoods than in others in the

same county or district : resembling the rust or mildew in wheat, which destroys here and there whole fields of grain, while the adjoining ones remain free from its ravages. And this has been the case not for a single season, but for many successive years; so that persons visiting their friends in an infected district, and returning home, to sicken or to die, gave such force to a belief that the disease was contagious, that the nearest friends and relations ceased to visit each other ; and the sick were left to contend against a most formidable disease, with only such assistance as could be afforded in a family where probably more than three fourths were confined at the same time.

It is my opinion, and as such only I deliver it, that neither the infection producing winter or summer epidemic extends more than one hundred yards from the earth where it exhales or is emanated, unless driven by a current of wind, when it may reach ten times that distance. This I know is a debatable subject among the learned, not only of this country but of Europe. In the United States the effluvia is thought by some to reach three quarters of a mile, while others allow it to travel two or three miles. In North Carolina no experiments have

been, nor do I believe there ever will be any, made, calculated to settle this point. The whole eastern part of the State is alluvial, low, level, rich, and so intersected with creeks, swamps, mill-ponds, and pools of stagnant water, that there are few plantations, towns or villages which have not more than one on each of them capable of producing enough miasmata to infect a whole neighbourhood. Whilst these sources are passed without regard to their deleterious effects, by all persons in their daily avocations, it is not surprising that most of them take the disease, without any attempt to locate the cause of it.

Indeed, on some of our plantations, the whole soil is so moist, so rich, and contains so much vegetable matter in a state of decomposition, and animal matter where fish are used as manure, that every foot of cultivated earth contains (at the sickly season of the year) the seeds of disease. Hence it is that our negroes, in saving fodder during August and September, generally have intermittents.

In Europe they give no bounds to the influence or extent to which the cause of pestilential fever may not reach ; and ever attribute to it the power of self-procreation. Dr. Good (in his learned book on nature) compares miasmata to

yeast added to any liquor capable of fermentation ; and supposes the whole air, like a cask of beer, becomes participant in the fermentation. He says "a few pestilential miasms are thrown from a stagnant marsh, or foul prison, and give birth instantaneously to myriads and myriads of the same particles, till the atmosphere becomes impregnated with them, through a range of many miles diameter. Two or three particles of the matter of plague are packed up in a bale of cotton at Aleppo, and many months after set at liberty in Great Britain ; aided by the stimulus of air, they instantly begin to work, and procreate so rapidly that the whole country, in less than a week, is laid prostrate to the enormity of the disease.

To disprove this assertion, it will only be necessary to recollect that Great Britain was never more populous than at this time ; that there are many stagnant marshes, and many foul prisons within the kingdom, and many bales of cotton annually imported from Aleppo and Alexandria ; and that, with all the power said to be possessed by the miasms from such numerous sources, the pestilential diseases produced by them have never extended over the whole kingdom ; have not prevented the march of the country in civili-

zation, wealth, and population ; and have not even caused the marshes to be drained or filled up ; nor stopped the importation of cotton from the seats of the plague. Sure I am, if the opinion of Dr. Good was correct, the miasm in procreating so rapidly from our marshy country, and extending over the whole State, would leave it in a single season without an inhabitant, from "the enormity of disease."

## CHAPTER VI.

THE EXCITING CAUSE OF FEVER ACTS DIRECTLY ON THE  
BLOOD VESSELS.

How the deleterious particles which float in the atmosphere operate; whether, as I have ventured to suppose, they are derived either from the bowels of the earth, or are generated on the surface, from the combined action of heat and moisture on decaying vegetable or animal matter, has produced much speculation, and is the chief foundation of the sublime and mysterious theory of Dr. Darwin, which, since his time, has been generally taught in the most illustrious medical schools of the United States.

Dr. Gardner (in his Treatise on Animal Economy) suggested this opinion long before the writing of Dr. Darwin, and recommends those visiting hospitals, to eat breakfast before their visit, and thus defend the stomach against contagion; and to avoid swallowing during their attendance on the sick, lest the saliva enveloping the contagious matter might convey it into the stomach and produce fever.

Dr. Rush supposed\* that the exciting cause operated first on the olfactory nerve, and was conveyed by that to the brain, which was the seat of fever. The Doctor did not, however, enlarge much on his theory, and as his opinion has not been published, it has elicited no notice by those who have followed him.

Dr. Darwin† contends that even the small-pox, by inoculation, produces the disease by sympathy with the stomach; and that the matter of small-pox, or any other poisonous particle floating in the air, and capable of producing fever, acts primarily on the stomach, by attaching itself to the mucous of the tonsils, or being mixed with the saliva and swallowed, and producing inflammation in the mucous lining of the stomach. In case of small-pox, he supposes "the variolous inflammation of the stomach, like the circle around the puncture of an inoculated arm, increases every day, and, like that, becomes large enough to disorder the circles of irritative and sensitive motions, and thus produces fever fits, with sickness and vomiting." I confess I am not sufficiently conversant with this theory to admire or adopt it. Besides being

\* See MSS. Lectures.

† Zoonomia.

mysterious and not easily understood, I cannot reconcile it to the universally admitted opinion that nature is never circuitous in her great operations. Indeed, I cannot credit the existence, for a single day or hour, of an incipient inflammation, or even of a pustule in the stomach, without such inflammation becoming immediately intolerable to the patient who might unfortunately carry it about him. Every mouthful of food he took, every drop of water he swallowed, would be instantly rejected. He would become at once tormented with the most agonizing heat, heart-burn, hickup, and mausea, which are constant attendants on an inflamed stomach. Yet we see patients eat and drink, and drink freely, not only water, but wine and, in some cases, ardent spirits,—both in the forming state and throughout the continuance of a long and violent fever,—and even express great pleasure and satisfaction in such drink. But knowing that I am treading on sacred ground, and wishing not to irritate the friends of the dead ; and believing, as I most ardently do, that the theory is about giving way and crumbling into dust, from its own stupendous weight, I shall dismiss the subject, under the fearful impression that what I may myself propose will hardly establish itself as a more powerful substitute.

In differing, therefore, from Drs. Gardner and Darwin, or whoever of their disciples that sustain their theory of sympathy with the stomach, I claim a right common to all ; a right to propose and defend (as far as my poor abilities and poor opportunity will permit) a theory, whether new or otherwise ; whether to be established, and have a fleeting existence, like the many doctrines on the same subject, or to be frowned out of countenance by the great schools which claim the sole authority to propagate medical doctrines. Such, however, as it is, I am myself satisfied of its truth, and it shall be freely, if not fully, offered to the public, with a hope that it will be regarded with charity, and not condemned without an impartial examination.

It is my opinion that *the exciting cause of fever acts directly on the blood-vessels, through the medium of respiration* ; when the exciting cause is not evidently applied to them in some other way.

The blood-vessels being composed of muscular fibres, running in every direction, with nerves passing through them, possess sensibility and irritability. The lungs, which are the organs of respiration, contain a larger proportion of blood-vessels than any other part of the system ; and

the circulation of blood through them, in a given time, is equal to that of every other part of the body. They are, moreover, of a spongy nature, and so permeable that substances introduced into them by inspiration, pass immediately into the blood ; and when these particles possess much odour, (as spirit of turpentine) and are introduced in sufficient quantities, they are soon discovered in the secretions.

The quantity of air taken into the lungs at each inspiration, has been computed, by Rostock, to be about forty cubic inches ; so that it must be very evident that if the quantity of deleterious effluvia floating in the atmosphere was small, when compared with the large quantity of air breathed, yet a sufficiency would be soon inhaled to produce febrile action on the blood-vessels, which are *the seat of disease, and the system most exposed to its operation.*

This opinion is confirmed, first, from the operation of variolous, or vaccine matter, when applied by inoculation ; it being certainly more natural and rational to conclude that the specific matter of these diseases operate more likely on the blood-vessels, to which they are carried by absorption, than that they act by sympathy with the stomach. For it is hardly to be supposed

that either of them would produce inflammation of the stomach, if swallowed directly into it. And because, moreover, it is well known that the vaccine disease cannot be communicated, except by vaccination.

Secondly. By the poisonous matter which is injected into the blood-vessels, by the bites of venemous reptiles, and the stings of poisonous insects ; where the fever sometimes follows immediately, and violently, without any previous derangement or sickness of the stomach.

Thirdly. Putrid substances injected into the blood-vessels have, according to Darwin, Magendie, and Gaspard, occasioned fevers of the most malignant characters.

Fourthly. The matter from ulcers, in different parts of the body, particularly if of bad or vitiated nature, causes fever of hectic character. It moreover produces, according to the celebrated Benjamin Bell, besides hectic and colic, other febrile diseases, terminating in dropsies. The same author has supposed that the matter of ulcers (which was the subject of his treatise) produced fever by operating directly on the blood. In opposition to the truth of this theory, it may be stated that the blood has not been discovered to possess sensibility or irritability ; whereas, that

it may and does produce the effect, when applied to the blood vessels themselves, with which it must come in contact through the medium of circulation, and which are known to possess both sensibility and irritability, is most naturally and readily to be imagined.

I am willing to admit that it would seem more reasonable to believe that the febrile diseases affecting the stomach and intestinal canal, would reach more directly the seat of disease by the conveyance pointed out by Drs. Gardner and Darwin, viz. : for the exciting cause to be conveyed with the mucous from the tonsils, or with the saliva, passing down the throat, to the seat of local affection. But I cannot admit that nature pursues two methods to effect the same object. In fever, where local disease is to be produced, it is as easy for the exciting cause to reach the stomach, or intestines, as it is for it to reach the head, the lungs, or the liver. They all possess peculiar arteries, which take origin from the great aorta, or its branches ; and the exciting cause can as readily be sent to one organ of the body as to another. It is therefore probable that the local affection in fever is owing entirely to accident ; the diseased local action being produced either from the circumstance of

the artery supplying the diseased organ with a larger portion of the exciting cause than any other part of the system ; or of some previous derangement of the part so affected.

## CHAPTER VII.

HOW THE EXCITING CAUSE OPERATES TO PRODUCE  
FEVER; WITH SOME EXPLANATION OF THE SYMPTOMS.

The poisonous effluvia which is the cause of fever, I have supposed, in the preceding chapter, to produce fever by operating directly on the blood-vessels; most generally through the medium of respiration. That malignant matter, I believe, is either most powerfully stimulating, or sedative in its nature, and excites something like paralysis on the larger blood-vessels near the heart. Sometimes in violent febrile attacks, as in plague or yellow fever, the paralysis is complete, and the first action of the exciting cause is so violent as to stop at once the motion of the heart and arteries, and to terminate in death.

Where a paralysis is produced, either by poisonous matter, whether strongly stimulating or sedative, the natural action of the heart and arteries are of course lessened; the blood ceasing to be propelled as usual from the heart through the arteries, becomes accumulated in the trunk of the body; the lungs become en-

gorged, and the veins still continuing to return the blood to the heart, the surface of the body and extremities become cold; chilliness and ague ensue; thirst, sometimes vomiting, and the accompanying symptoms which precede fever are completed.

It is a general rule, as far as my experience has gone,—although, as far as my reading enables me to judge, the fact has not been noticed by any other physician,—that where one organ, or any one of the viscera, becomes diseased, the nervous fluid or sensorial power of Darwin, intended to supply each organ or viscous to enable it to perform its proper function, is diverted from the healthy organs and expended on the diseased part of the system, to assist the afflicted member to recover its wonted operation. In such diversion, the other organs become, of course, debilitated and temporarily deranged.

This law of the animal economy may be compared to that benevolent practice which exists in all well regulated agricultural neighborhoods: One farmer becomes oppressed with the necessity of saving, in a short time, a heavy harvest; but, possessing not the physical means to do so within the time, he calls on his neighbours for aid; their own operations at home are

suspended, the work which oppressed him is accomplished in due time, and each man returns home and resumes his usual occupation. So, when the heart and large arteries become oppressed with a load of blood, which they cannot circulate in due time, the nervous fluid, intended to supply the stomach with the necessary stimulus to promote digestion, or the liver to enable it to secrete bile,—and so of all the organs or glands in the system,—is sent from the brain to add new power to the lungs and to the heart and arteries. The peristaltic motion of the fibres of the stomach becomes enfeebled from the want of this accustomed stimulus, digestion becomes suspended, the motion of the fibres of the stomach inverted, and nausea and vomiting ensue. This vomiting, by the mechanical operation of the diaphragm on the lungs, assists respiration, and is calculated to promote the action of the blood-vessels, and enable the large ones to relieve themselves of congestion by slowly and gradually re-establishing the circulation. During the contest the secretion of the bile, with the other secretions of the system, are suspended. Hence the thirst, from a want of the usual quantity of saliva in the mouth. Hence, also, the absence of bile,

and the scarce and colourless state of the urine. The yawning, the sighing, the restlessness, and the disposition to hover around the fire, to go into a warm bed, and to take hot drinks, arise, during the chill, from instinct, and are calculated to expedite the circulation through the lungs; to acquire ease by change of position, to increase the circulation by heat, and thereby remove the unpleasant sensation of oppression about the præcordia, as well as to supply the deficiency of moisture occasioned by the absence of saliva.

“This instinct has been explained to be a divine something, a kind of inspiration; whilst the poor animal that possesses it has been thought little better than a machine.”\*

To this law of the animal economy, and to this instinct, I would refer the operations of Dr. Cullen’s “*Vis Medicatrix Naturæ*,” so powerful in preventing that death to which he contends ague has a direct tendency; and in producing that reaction of which fever is the essence, and which requires such skilful management to invigorate when not sufficiently powerful, and to restrain when disposed to act with too much impetuosity.

\* Darwin.

To conclude, I suppose the exciting cause of fever (when operating on the blood-vessels) produces more or less of paralysis, according to the force of application, and the power to resist ; that the cold stage is formed from a continued return of venous blood from the extremities, while the supply of blood and consequent heat is withheld, from langour and want of circulation in the remote arteries ; that the circulation is re-established, by an unusually large supply of nervous fluid or sensorial power to those blood-vessels which labour under an engorgement ; that, during this supply to the engorged vessels, the other organs become torpid and do not perform their regular functions ; that vomiting sometimes ensues, which aids, by a mechanical operation, the circulation of the blood ; that yawning, taking hot drinks, and the recourse to fire or a warm bed, are instinctive operations, all tending to the same end ; and, finally, that where it is in the power of these combined causes to overcome the paralysis, the circulation or reaction is established, the hot stage of fever is formed, the nervous fluid or sensorial power again becomes equally distributed to the whole system, and something like order is restored to the various organs and functions of the body.

## CHAPTER VIII.

## OF THE NATURE AND VARIETIES OF FEVER.

Before entering minutely into the discussion of the nature of any one of the varieties of fever, I wish to lay it down as a fact, which I hope to establish in the course of this treatise, that every fever, by whatever name it may be known, or to whatever species it may belong, according to the arrangements of nosological writers, is liable to appear, and does occasionally appear, from the commencement of the attack, in the several varieties hereafter to be laid down. To be more particular, what these writers treat as inflammatory is sometimes typhoid and typhus; that the three varieties run into each other in the same fever; and, in short, that the name conveys no meaning as regards the morbid state of the system, and points with no certainty to the method of cure.

It was stated in a former part of this work that there was but one fever, and that whenever, and in whatever form, it might occur, it belonged to one of the varieties of inflammatory, typhoid, or typhus. Such varieties, in the form of

fever, have been universally admitted by systematic writers. They are known to possess many symptoms in common with each other, but as a peculiar morbid state of the system is associated with each variety, and each requires a different and appropriate remedy, it becomes of the greatest importance to him who may be called to prescribe, to be enabled, by unerring rules, to ascertain to which variety the fever belongs. One variety is, moreover, apt to change into another, and it not unfrequently happens that the same fever, in the progress to health or death, takes on each variety ; it therefore becomes of much consequence to be able to detect those changes, and to alter the remedies with the change of varieties. These facts are in accordance with the best medical writers ;\* they require, therefore, no proof or illustrations. I shall now proceed to consider, first, the *nature* and *character* of that variety of fever called *inflammatory*.

This species or variety of fever has been distinguished by various names, by different medical authors ; as ardent fever, continued fever, synocha, which is that of Sauvages, Linneus,

\* Cullen, Good, Rush.

and Cullen ; and by that of cauma by Dr. Good. I prefer, however, the common English term of inflammatory fever, as being most generally understood, and a proper translation of most of the Greek terms used by other writers. It is known by increased heat generally ; quick, (and when not suffocated) hard, and strong pulse ; a plumpness of the features ; a sparkling eye, and a desire for cold drinks, all shewing that the excitement in the blood-vessels is above the healthy standard. This variety of fever is frequently accompanied with local pain, and although it has been heretofore supposed, particularly by those who have called it a continued fever, to run its course with only occasional fluxes and refluxes, for several days ; yet, it will be attempted to be hereafter proved that all the varieties of intermittents, remittents, billious, and yellow fever, of nosological writers, are subject to, and do frequently possess, all the distinguishing characters of inflammatory fever.

To distinguish this variety of fever from those to be hereafter noticed, a number of circumstances occur. In this fever there are an unusual degree of heat, a plumpness or fulness of the features of the face, vivacity and sparkling appearance of the eyes, redness of the urine,

great thirst, and a desire for cold drinks and cool air. But the circumstance most to be relied on to ascertain the true state of the system, not only in this variety, but in the other varieties of fever, is to be found in the pulsation of the artery against the pressure of the fingers. The action of the pulse is influenced directly by that of the heart and arteries, as well as by the quantity of blood which the vessels contain. The art of pulse-feeling, therefore, when well understood, affords the best means of ascertaining the true state of excitement in the system, and is of itself generally sufficient to satisfy the physician, who possesses the true tact, of almost every thing necessary to be known to enable him to give a correct prescription. I am, however, disposed to believe, with Dr. Good, that this tact is not always to be acquired by study or practice. It resembles the taste for music and poetry, so essentially necessary to enable any one to become distinguished as a musician or poet. Hence the reason that so few, in the practice of medicine, gain any eminence in their profession. Hence it is why so many remain stationary, and have as much celebrity at first as at any season of their lives ; are constantly changing their places of abode, and abandoning

altogether a profession in which they are unable to obtain either their own confidence, or that of their patients.

The *doctrine of pulsation*, then, as well as the power to judge of the state of the pulse, is of the utmost importance to him who would practise physic, not only to his own comfort and satisfaction, but to the quietude and safety of his patient ; for, by the strength or weakness, the hardness or softness, the freedom or oppression, the regularity or irregularity, of the beat of the artery, we are enabled to determine many momentous facts, and particularly the state of the system, and the variety of fever under which the patient labours. To aid us in the true knowledge of these signs, the character of the prevailing epidemic must also be particularly considered ; for it must be at once admitted, that where fevers derive their existence from a common source, however they may vary in violence, however they may differ in local affections or common symptoms, they are generally, if not uniformly, of the same character, and require remedies of the same kind, differing also in the application as regards strength or force suitable to the violence or mildness of the symptoms.

Notwithstanding the great importance now

attached to the doctrine of pulsation, Dr. Good (in his study of medicine) denies that there is any pulsation in the arteries, and seems to deliver that opinion as one common to the physiologists of England. To this doctrine I cannot give my consent ; I have too often felt the stroke in my patient's wrists ; I have too often seen the beat through the skin on the neck of a delicate lady ; too often seen the motion in the foot, when one leg happened to be crossed over the knee of the other ; and have too often heard the beat of my own carotids when lying on my pillow. The doctrine resembles too much that of the idealists Burke and Hume, to gain the consent of any man disposed to believe the evidence of his own senses. They maintained that there is no such thing as a material or external world ; that the existence of man consists in nothing more than impressions or ideas ; or of pure corporeal spirit, which surveys every thing in the same unsubstantial manner as the visions of a dream. Between these doctrines there is no shade of difference, and while people rely on the testimony of their own senses, there can be but one opinion as regards them.

Dr. Rush, while a lecturer, seems to have

done more to inculcate the right understanding of the pulse than any other man. He divided it minutely, and described the varieties accurately ; his works however have not,—unfortunately for the public,—been published. He divides the pulse, in inflammatory fever, into,

First, The depressed pulse. "This state of the pulse," the Doctor says, "is occasioned by the stimuli acting so violently as to depress the system below the point of reaction, or by pressure on some great blood-vessel. It often descends as low as 40, 30, 20, and is sometimes so depressed that it is scarce perceptible. This pulse imparts a sense of tension to the fingers when long and attentively felt."

Second, "The catgut or corded pulse. This is small, quick, and distinct ; is generally quick, but not always frequent. It imparts a sensation to the fingers similar to that produced by feeling a tense piece of catgut, whence its name."

This, like the depressed pulse, is *most generally* tense ; there have however occurred cases, in my practice, where the pulse was excessively frequent ; where no tension could be discovered by the longest or most attentive feeling ; where, in fact, it resembled so much the pulse in typhus or low grades of action, as not to be

distinguished from it. In such cases there is an unusual degree of heat on the surface, a peculiar plumpness in the features, and a vivacity in the eye, which would distinguish them from typhus. There is, besides, a disposition so great in the system to reject stimulants, that on giving a dose of bark, toddy, wine, or porter, it is generally rejected on the nurse or physician who offers it to the patient. There is, moreover, in such cases, a frowning peculiar to the patient ; he seems to belong to the Red Gauntlet family, (if I may use the expression) the horse-shoe\* of that family is depicted on his forehead ; it becomes more enlarged by improper irritating prescriptions ; and shews itself more manifestly when those medicines are rejected.

Third, " The synocha or common inflammatory pulse is full, quick, frequent and tense ; it imparts to the fingers a sensation like a large quill."

Fourth, The synocha, a quick, frequent, moderately tense ; but small pulse ; a diminutive of the synocha, imparting a sensation to the fingers similar to a small quill ; and occurs in chronic rheumatism, gout, and consumption."† To

\* Scott's Red Gauntlet.

† Rush's MSS. Lectures.

which may be added inflammatory, intermittent, and remittent fevers ; and fever with local affection of the stomach and bowels.

This variety of fever occurs in the summer and fall, and belongs as well to those epidemics deriving their source from miasmata, as to the winter epidemics or influenza, which I have supposed derive their origin from subterranean emanations. It has been supposed to constitute that great division of fever, the synocha of Sauvages, Linneus, and Cullen, as well as the cauma of Dr. Good ; and where it is accompanied with fixed pain in some part of the system, names have been appropriated to each, designating not only the inflammatory character of the disease, but also the local affection. Thus phrenitis denotes not only an inflammatory fever, but, according to these authors, an inflammation of the brain ; pneumonitis, an inflammatory fever with local affection of the breast, and so on from the brain to the bladder ; every organ or viscus in the whole body, having an appropriate term, designating the inflammatory type of fever and local affection.

This local affection in fever, from the time of Boerhaave, until long after the experiments of Hewson and Hunter on the blood, shewing

its absurdity by proving that the blood was more thin in an inflammatory state of the system than in health, was ascribed to an error loci in the globules of the blood, on the supposition that globules too large to circulate in the extreme small vessels, became impacted into them and formed obstructions. The theory, as delineated by Dr. Cullen and Mr. Bell, is most plausible and beautiful, and since no substitute has been proposed it is to be regretted that the experiments of those gentlemen, on the blood, should have made it untenable.

Congestion seems now the popular term for those local affections in fever, and is equally or more objectionable than error loci of the late schools. It is derived from *congers*, (to gather into a heap,) and means, according to Dr. Parr, "a swelling which gradually arises, and slowly ripens."

Now in fever with local affection, whether of the inflammatory, typhoid, or typhus variety, there is seldom any evident swelling, and the pain terminates generally by what is termed resolution, rather than by suppuration or gangrene.

I am aware that Dr. Armstrong, in his *Essay on Typhus*, has used the word "congestion" in

a very different sense from the definition of Dr. Parr. Dr. A. has used it to signify that state of fever which Sydenham and Rush treated as one of the most violently inflammatory character, in which there was an oppressed state of the heart and arterial system. While Dr. A. means the same by the term, he employs it to denote one of his stages of typhus fever, when the arterial system is in a state of depression ; and in another stage, when the venous system is congested. These two terms of arterial and venous congestion, denote opposite states of excitement in the blood-vessels, and cannot therefore with propriety be classed as the same fever, agreeably to nosological writers ; and, according to the doctrine here taught, while the former belongs to that variety called inflammatory, the latter is of course typhus.

Dr. Armstrong, in placing typhus fever among such as time has long sanctioned to belong to another state of the system, has attempted to break down one of the best landmarks in the whole practice of medicine, by classing together different varieties of fever, and such as require different modes of treatment. He endeavours to justify his arrangement, from his belief in the contagious nature of typhus

fever, and assigns no other reason for the outrage he has thus committed on the writings of other physicians, or the total disbelief, in the United States, of typhus ever owing its origin to such a cause.

He might, for the same reason, have so called the eruptive state of fever, which is universally admitted to be contagious, although of an origin differing from typhus, and generally, though not always, attended with inflammatory fever. While others, whose explanations of the term used are less satisfactory than Dr. Armstrong's, have published essays in the "Medical Recorder" on congestive typhus, Dr. Meritt, of Virginia, has written for that work a very learned and valuable essay on the congestive billious remittent epidemic of Virginia.

I coincide entirely with the explanation given by Dr. Armstrong of the different states of action in the heart and arteries, in the arterial and venous congestion. My chief objection to his work is his placing the typhus with his congestive state of the arterial system, or state of oppression. Had he confined his remarks on typhus to a venous congestion, or a fever of diminished excitement, his work would have been better understood, and would have con-

formed better with the established doctrine on that fever.

Cullen, Good, and most English writers, have defined typhus to be contagious; how far this opinion is supported by American physicians will be best seen by reference to the critical notes which Dr. Potter has added to an edition of Dr. Armstrong's work published at Baltimore.

In the state of oppression, as well understood until this late term of congestion was introduced, I believe that when it occurs in the arterial system, the heart is more or less paralyzed by the exciting cause of fever, the fibres composing the heart and muscular coat of the arteries are contracted; the diameter of the ventricles of the heart, and the caliber of the arteries are thereby lessened, in which situation they neither receive nor transmit so readily the venous blood as they would do in a state of health, or in fever of less excitement. This state of oppression or congestion, may as certainly be produced in the heart and arteries by the excessive use of ardent spirits as by morbid exhalations. Thus situated, the heart may be compared to the flutter wheel of a saw-mill, surrounded with back water, having a full head, with the aperture or

gate but half open. The water received by the wheel would be insufficient to displace the back water, and give the wheel its usual motion, hence the saw, which may be compared to the pulse, would be irregular, confused, and jerking in its motion.

Inflammatory fever, which is the subject of the present article, is frequently met with in the winter epidemics. In fact, it more frequently occurs in that season than either of the other varieties of fever which remain to be treated of. I have seen the winter epidemic, not only in the form of Dr. Cullen's synocha, or inflammatory fever, without local affection; but I have also seen it in every species of Dr. Good's genus empresma. I have, moreover, seen it in the forms of cholera, of diarrhœa, and of dysentery.

In this fever, as in all others, there is a vast difference of grades or degrees of violence. It is most frequently seen in the mildest form of inflammatory fever, attended sometimes with slight local pains, which are not always or long confined to the same part of the body; frequently with mild catarrhal symptoms; with the synocha pulse of Dr. Rush, that is, "full, frequent, and moderately tense, imparting to

the fingers a sensation like that of a large quill." It is, however, at other seasons,—and during the same seasons in different patients,—marked with all the symptoms of the most violent and dangerous inflammatory fever; is attended with acute pain, great heat, and anxiety; with incessant vomiting, where it occurs in the form of cholera; frequent and large discharges, when in the form of diarrhœa; and the same frequency of discharges, with tormenting pain, where it assumes that of dysentery. Here the pulse is depressed or suffocated; often so small, quick, and frequent, that no tension can be perceived, except by a person who possesses, in an eminent degree, the tact for pulse-feeling. It is, however, always accompanied with a plumpness of the features, with heat on the surface, a sparkling eye, and with that peculiar mark of the Red Gauntlet family, "the horse-shoe on the forehead," which will readily distinguish it from typhus.

Besides the frequent occurrence of winter epidemic, in the form of inflammatory fever, all the various summer and autumnal fevers (as the higher grades of billious, yellow, remittent, and intermittent fevers of authors) appear also in this variety of fever. In proof of this fact, it

will be only necessary to refer the reader to the published works of Dr. Rush, who states not only yellow fever to have been highly inflammatory, in every history which he has written of that form of fever, but asserts, also, that remittent and billious fevers were frequently inflammatory; and that they became so particularly one year, in the Pennsylvania hospital, after the weather became so cold as to make fires necessary in wards of the patients.

In the first volume of his works, [page 179,] he publishes a short account of the efficacy of blisters and bleeding, in the cure of intermittent fevers. He says, "but in those cases where blisters had been neglected, or applied without effect, and where the disease had been protracted into the winter months, I have generally cured it by means of one or two moderate bleedings.

"The pulse is generally full, and sometimes a little hard; and the blood, when drawn, for the most part, appears sizzly."

To this testimony of Dr. Rush I can with propriety add my own, having met with cases of intermittents which not only resisted blisters, and even salivation, that were cured by bleeding. I was once informed by the late Gover-

nour Samuel Johnston, of this State, that it was formerly the practice here with persons labouring under intermittents, to lose blood; after which they were certainly cured by the bark. He added, that the practice succeeded as well then as any that had been since adopted.

Dr. Rush further adds, that "the efficacy of these remedies will probably be disputed by every regular bred physician who has not been a witness to their utility in the above disease, (intermittents) but it becomes physicians, before they decide upon the subject, to remember that many things are true in medicine, as well as in the other branches of philosophy, which are very improbable."

Cleghorn,\* in treating intermitting and remitting tertians, supports the truth of this doctrine by his own practice. It is to be regretted that he does not note particularly the state of the pulse, or other symptoms, shewing clearly the state of excitement in these fevers; but from his practice, which was in general successful, it is quite evident that he considered this fever, as it appeared on the Island of Minorca, in the first stages of the disease at least,

\* On the epidemical diseases of Minorca, page 197.

to be inflammatory. He says, "for my own part, when I was called early enough, in the beginning of these fevers, I used to take away some blood (unless there was a strong contraindication) from people of all ages; namely, from robust adults, ten or twelve ounces; from others a smaller quantity, in proportion to the their strength and years. And farther, if a violent headache, and obstinate *delirium*, and great heat, or pains of the bowels, were urgent, within a day or two I repeated the bleeding." For the good effect of which, see his book, page 197.

Doctors Cullen and Good do not directly admit the truth of this doctrine, in their splendid nosological writings; yet, that such was the case may be fairly inferred from some incidental observations which they both make on intermittent fever.

The first\* (without noticing the pulse, or other circumstances calculated to shew the state of excitement) says, "our second general indication for conducting the paroxysm of intermittent fevers, so as to obtain a final solution of the disease, may be answered,

"First, By exhibiting emetics during the

\* Vol. 1, page 203.

cold stage, or at the beginning of the hot. Secondly, By opiates given during the time of the hot stage.

“The circumstances which may especially prevent the fulfilling of those two indications, and therefore give occasion to our third, are a *phlogistic diathesis* prevailing in the system, and congestion fixed in the abdominal viscera. The first must be removed by blood-letting and the antiphlogistic regimen ; the second, by vomiting and purging.”

From this quotation it evidently appears that Dr. Cullen met with intermittents which were not to be cured by his common tonic and stimulating plan, but being accompanied with a phlogistic diathesis, which in our day and in our language means an inflammatory diathesis, it is most effectually removed by the Doctor's own remedies, “blood-letting and the antiphlogistic (or cooling) regimen.”

In his learned work on the study of medicine, Dr. Good has the opinions and writings of most authors on intermittents ; there is, however, nothing in his book which goes to prove that the fever, as noticed by him, was ever inflammatory, except what he extracts from the account given of it by Sir George Barker, in the

year 1781.\* “These fevers,” (intermittents) says Sir George Barker, “were, in general, no other than the common ague; but, in the inland counties of England, they were often attended with peculiarities extraordinary and alarming.” Among those peculiarities, he adds,† “but the distinguishing character of this fever was its obstinate resistance to the Peruvian bark; nor, indeed, was the prevalence of the disease more observable than the inefficacy of the remedy. Though the quantities of the bark usually given were exceeded, the fit was apt to return, rarely altered, either with respect to time of invasion, or the intenseness of the symptoms; and just as if no means had been used to prevent it. A drachm of the bark in powder was frequently administered every second hour without averting the fit.”

It does not appear from any extracts made by Dr. Good, from the essay of Sir George Barker, that any remedy was tried for the purpose of averting the fit, except the bark, which Dr. Reynolds says was, in 1782, universally successful, and that he was as much pleased with its efficacy in that year, as he was mortified in 1781 with its want of power.

\* Vol. 1. pages 76 and 77. † Idem, page 77.

From the want of efficacy in the bark in the cases related in 1781, I have little hesitation in saying that these eminent physicians mistook, entirely, the character of the disease. They had been accustomed to prescribe for it by name only: the bark was the grand specific; it was used without effect, and to the astonishment of those who prescribed it.

## CHAPTER IX.

## OF CHOLERA DIARRHŒA AND DYSENTERY.

I place these diseases together, as they are *all* what Dr. Sydenham terms the *last*, viz: "Febris introversa." I am aware that Dr. Cullen has not placed cholera or diorrhœa among fevers; but there is abundant testimony (at least since his time) to prove that they ought to be so arranged.

Dr. Rush, in his Treatise on Cholera Infantum, says, it is accompanied with remitting fever; that the fever was frequently inflammatory, and that it became so much so, after the yellow fever of 1793, in Philadelphia, as to make several bleedings necessary.

Dr. Cartwright, in a very learned and ingenious essay (published in the Medical Recorder) on the subject of cholera infantum, has divided the disease into seven pathological stages. He shews clearly that several of those stages are accompanied with fever of an inflammatory type. His divisions, however, are, in my opinion, unnecessarily minute, and such as cannot, ac-

according to my experience, be followed in common practice.

Dr. Horner has proved, by late dissections, (accounts of which were published in the Recorder) that the disease consists of inflammation of the mucous membrane of the intestines. This state of local inflammation may be accompanied with excessive or diminished arterial excitement ; and my experience in the disease (which has prevailed more or less every season) induces me to believe that, in its commencement, the fever is generally inflammatory, but it is soon reduced and rendered typhus by the nausea, vomiting, and copious discharges with which it is attended.

Of that desolating cholera infantum which prevails in the large cities of the middle and northern States, and which continues from six weeks to twelve months, and reduces its subjects to most complete skeletons before death, we have few cases in North Carolina, and there are still fewer, according to Dr. Caldwell, in New-Orleans, where, he says, the disease is unknown. I have not seen more than three cases during a practice of thirty years ; in all those the fever was slightly inflammatory, and chronic in its nature. One of the cases, after continuing nine

months, and resisting all the usual remedies then known for that disease, was cured by a free use of buttermilk and whey. During the whole continuance of this case, the little sufferer had a morbid appetite, but whenever he was indulged in that strong food, which was found so generally beneficial by Dr. Rush, he was greatly distressed by it ; and his symptoms were sometimes so much aggravated by it, as to threaten immediate dissolution.

Dr. Cullen's indications of cure in this disease, and which he asserts\* had been long established by experience, shew that the disease was inflammatory, or one of too much excitement. He says, "in the beginning of the disease, the evacuation of the redundant bile is to be favoured by the plentiful exhibition of diluents, both given by the mouth and injected by the anus." To this practice Dr. Kuhn (formerly Professor of the Practice of Medicine in the University of Pennsylvania) used to add a mixture of magnesia, gum-arabic, and peppermint.

Although it has become my duty, in order to make out the proposition heretofore laid down, viz. : that the various fevers, as described by the

\* First lines, vol. 4, page 46.

many nosological writers, are apt (notwithstanding the position they hold in their respective works) to be sometimes inflammatory, at others typhoid, or typhus ; I would not convey the meaning that cholera is always inflammatory in its commencement. On the contrary, as will be attempted to be shewn hereafter, the reverse of this proposition is most often true.

Diarrhœa is not admitted, by Dr. Cullen, more than cholera to a febrile disease ; but, on this subject, there can be no doubt. The febrile symptoms are always apparent in the pulse, in the countenance, in the secretions, and in every mark known as characteristic of fever. It is, moreover, the earliest febrile disease in warm weather ; attacks principally those who are exposed to the common cause of fever, and is generally, though not always, inflammatory throughout.

The dysentery is acknowledged, by all writers, to be fever ; and, by most of them, to be inflammatory. Exceptions, however, occur to the latter assertion, which will be the subject of future remarks.

Upon the whole, I would conclude, on this subject, that these diseases are produced by the common cause of summer epidemics, and that,

in their respective characters, they are most generally accompanied with a similar grade of arterial action with the intermittent, remittent, or billious fever of the same year and season.

## CHAPTER X.

## OF THE ERUPTIVE STATE OF FEVER.

All the eruptive diseases known by writers are placed by them (with some exceptions to be hereafter noticed) either directly or as far as can be inferred from their indications of cure, amongst inflammatory fevers. It is not now my purpose to shew that this arrangement is not correct; yet I propose to prove, hereafter, that these diseases frequently appear, if not in the typhoid, at least in the typhus, state of fever.

In other febrile diseases, as recorded by most medical authors, the principle here contended for, viz.: that every class or form of their fever is or may be found to belong, sometimes, to the inflammatory, and at other times to some one of the other varieties of fever, is so fully admitted that it is totally unnecessary for me to do more than take a slight passing notice of the fact. Thus, for instance, they admit the acute and chronic states of rheumatism; the tonic and atonic gout; the acute and chronic hepatitis; in the hydropic and hæmorrhagic states of fever; the tonic and atonic, or active and

passive ; the sanguineous and serous apoplexy, &c.

Cynanche maligna and scarlatina are the same disease, under different states of excitement ; for an illustration of which, see John Clark.

While the cynanche maligna is attended with typhus fever, and sometimes of most malignant character, the scarlatina is either accompanied with typhoid or mild inflammatory symptoms. They are epidemic at the same time, and are to be seen in the same neighbourhood, and frequently in the same family.

## CHAPTER XI.

## OF THE TYPHOID STATE OF FEVER.

The typhoid variety is placed, by Dr. Cullen, between his synocha and typhus states of fever, and is called by him, synochus. It is admitted by the Doctor, and most other medical writers, to be disposed, and generally to run into one of the other varieties of inflammatory or typhus. However true this assertion may be in practice, and I am not disposed to deny it, I am yet certain that it is a distinct variety ; and, under proper management, is cured frequently without going into typhus. Into the other variety, (or inflammatory) I believe, it never runs, unless the stimulating treatment has been improperly used.

In treating of synochus, neither Drs. Cullen or Good notice the state of the pulse, so as to distinguish this from the other varieties of fever. Dr. C., in his synopsis, calls it " a mixed fever ;" also, " a contagious disease, a fever composed of synocha and typhus ; in the beginning, the former existing ; in the progress and towards the end, the latter." In his *First Lines*, he

thinks "the limits between synochus and typhus will be with difficulty assigned ;" and is disposed to believe "the synochus arises from the same cause as typhus, and is therefore only a variety of it."

Dr. Good believes it is the inflammatory typhus fever of Dr. Armstrong, and these gentlemen concur in the opinion with Dr. Willis, that it is the deputory fever of Dr. Sydenham, as described by him in 1663.

In the opinion of these learned gentlemen I do not concur ; on the contrary, I believe it is a distinct variety of fever, is neither typhus nor inflammatory, and is not more apt to run into either of those varieties, than either of those varieties is to run into typhoid ; but that it has, like them, its own appropriate remedies, and, when properly administered, it ends as the other varieties do, in health, and preserves throughout its original type.

Neither do I concur with them in the opinion that this is the deputory fever of Dr. Sydenham. That distinguished physician considers the deputory fever as the finale of the preceding summer diseases, and speaks of it, and treats it, as an inflammatory disease ; but, like the former gentleman, makes no particular mention of the

state of the pulse. I would rather refer this fever to the class of "a new fever," which Sydenham describes as having arisen after the disappearance of his deputory fever. He denies that this new fever was bastard pleurisy, and describes the symptoms. "First, intervals of heat and cold succeeding each other ; second, frequently pain in the head and limbs ; third, *a pulse not much unlike that of a healthy person* ; fourth, the blood taken away commonly resembles pleurisy blood ; fifth, a cough mostly with the other concomitants of a mild peripneumony ; sixth, sometimes a pain in the neck and throat ; seventh, though the fever be continued, it often increases towards night, as if it were a double tertian, or a quotidian."\* This fever, the Doctor observes, does not well bear repeated bleedings. His remedies, therefore, after his usual bleeding of ten ounces, were blisters, gentle purging, and composing draughts.

I am not disposed to admit, with Dr. Good, that the typhoid fever is the inflammatory typhus of Dr. Armstrong. This is really and truly the synocha of Dr. Cullen, and the injury which Dr. Armstrong has done to the unity of

\* Wallis' Sydenham, vol. 2, page 317

his own work, as well as the science of medicine, in placing an inflammatory fever amongst typhus, is incalculable. I cannot admit any fever to be typhus, which is accompanied with excessive arterial excitement, and requires, as it did in Dr. Armstrong's own case, and the cases of others reported by him, several bleedings to cure. I can as readily admit the idea of boiling ice, or red hot snow, as of inflammatory typhus. The latter terms denote opposite states of diseased action, as well as the former do opposite states of temperature, and are equally incompatible with each other.

The typhoid state of fever is attended with increased heat, sometimes local pain, the features nearly natural, the pulse full, quick, and round, with an occasional tense stroke occurring once in six or eight strokes. This tense stroke requires great accuracy to detect it, and is apt to escape the observation of most physicians who have not the tact for feeling the pulse in an eminent degree. Dr. Rush says the typhoid fever occurs in scarlatina, puerperal, hectic, and in the gaol or hospital fever. It has occurred frequently in my practice in the winter epidemic, and it may be said to be the common form of intermittents during the paroxysm ; the ty-

plus state occurring in the intermission. I have good reason to believe, from my own observation, that it occurs occasionally in all the particular fevers, as described by nosological writers. Dr. Chapman speaks of typhoid pleurisy as epidemic, in Philadelphia, happening principally amongst the poor, and such as suffer for fire-wood, warm clothing, and nourishing food.

## CHAPTER XII.

## ON THE TYPHUS STATE OF FEVER.

I have contended that there is but one fever, and have marked three varieties of that simple disease, because each variety (although possessing the common attributes of fever) is distinctly marked in character, and requires different and sometimes opposite remedies to cure it.

It is to be regretted with how little discrimination the typhus state of fever has been sometimes described, even by those who have attained the highest credit as observers.

We derive but little consolation from the etymology of the terms used in any of the sciences. The circumstances or incidents from which they sprang, seem not to afford much clue to the understanding of the terms as used by modern writers. Thus the word typhus is derived from the Greek word *tuphos*-fumo-smoke, and was, I presume, used in contradistinction to the term *cauma*, which means inflammation or burning. In conformity with an old adage, that "where there is much smoke, there must be but little fire," typhus may be said to be a slow

fire, the blaze of which is not apparent, which is suffocated and only emits smoke without heat or light.

The ancients as well as the moderns, until after the period of Dr. Cullen's life, have uniformly considered typhus as a fever with low grade of action. They have called it "the nervous fever," "the slow fever," "the forty day fever," but never, until lately, has it been called an inflammatory fever, or one of much heat or excitement. It is true that Dr. Parr, in his translation of the Greek term, has made it to signify inflammation, but in his description of the disease he has followed Hippocrates and Cullen, according to whom it is a legitimate continued fever, with reduced strength. Dr. Cullen defines it "a contagious disease, a little increase of heat; the pulse small, weak, and most commonly frequent; the urine not much altered; the functions of the sensorium greatly disturbed; and the strength much diminished." It is not my intention to detail particularly the symptoms of typhus or nervous fever, as described and treated by authors, under that particular name. My chief design here is to state that I object to the term being applied to inflammatory fever, or diseases which burn with-

out smoke and are accompanied with increased excitement of the system, as they belong more properly to Dr. Cullen's synocha, or Dr. Good's cauma. And I must take occasion, while on this subject, to protest against Dr. Armstrong's inflammatory typhus, and all those who have followed him, as a doctrine fraught with eminent danger, and greatly calculated to tarnish the high reputation which the Doctor's Treatise on Typhus has heretofore enjoyed.

I design to shew that this species of fever does not belong exclusively to the nervous or slow fever of others; but that it frequently exists, first, in the intermittent, remittent, and yellow fever forms of disease; and, secondly, that it frequently exists, also, in the winter epidemic in all its forms, and is seen in all the "itises" of Doctors Cullen and Good, from phrenitis down to cystitis.

## CHAPTER XIII.

THE TYPHUS VARIETY OF FEVER EXISTS IN THE FORMS OF DISEASE TERMED INTERMITTENT, REMITTENT, YELLOW FEVER, IN THE ERUPTIVE STATE OF FEVER, AND IN THE WINTER EPIDEMIC.

Dr. John Clark says that he never saw an inflammatory fever in his life. His practice, as well as the practice of Doctors Robertson, Miller, and Dickenson, and occasionally also that of Dr. Sydenham, in the cure of intermittent and remittent fevers, was to exhibit the bark freely, not only in the intermission, but during the paroxysm of the fever. This practice was most judicious and successful; and I put it to any professional man to say whether he ever saw a fever in which the bark could be retained on the stomach without great distress to the patient, except in that state of fever which is known as typhus. But in this state of fever, no matter in what form it appears, the bark sits pleasantly on the stomach, and its good effects are soon manifest.

This has been the type of nearly all the

summer epidemics which we have had during the last five years. It commences with chill, which is soon succeeded by fever, accompanied with a weak, quick pulse, great restlessness, sighing, and sometimes a disposition to vomit. Such is the debility in this disease, that patients sometimes die in the chill or cold stage.

Dr. Rush admits that some of the cases of yellow fever in Philadelphia were typhus ; and I have understood it was the practice of Dr. Stevens, a celebrated physician from the West Indies, as well as Dr. Currie, a physician of some eminence in Philadelphia, to treat all their patients with stimulants. Dr. Stevens was the friend of General Hamilton, and, it was said, cured the General, and several of his family and friends, with the warm bath, opium, and bark.

Later practice in that city goes to establish the correctness of this opinion ; for it seems the spirit of Turpentine has been used there by Dr. Chapman and other physicians, with more benefit than the remedies formerly employed, and which possessed contrary qualities ; or, in other words, fewer deaths have occurred, and a greater proportion of cases have terminated favourably under this treatment than did under

the depleting and salivating system of Dr. Rush and his adherents.

I have seen but few cases of yellow fever myself, of those few most were, I thought, typhus of malignant character ; and the only case which terminated favourably under my care, was treated with bark and wine. In the other cases thus treated, although the stomach retained the bark for six or eight hours, it was generally thrown off then with great force. Upon the whole, from what I have learned from others, or know by experience, concerning this particular fever, I am disposed to conclude that it sometimes appears in the inflammatory, and sometimes in the typhus variety, but that it is generally so violent in either case as to resist every remedy, and, like the extremes of heat and cold, to terminate in the same point—that of gangrene.

From what can be collected from the ancients on the subject of plague, which is but an aggravated form of yellow fever, I feel satisfied that this disease was also,—like its milder form in the United States,—accompanied with opposite states of excitement in the system. In the great plague of Athens, when Hippocrates was induced to leave his abode on the Island of Cos,

to visit and prescribe for the Athenians, we are told, "the disorder seemed to set all rules and experience at defiance. The same mode of treatment alternately produced salutary and injurious effects. Here Hippocrates exhausted all the resources of his art and exposed his life. In a disease setting all rule of art at defiance, it was not to be expected he obtained all the success due to such noble and generous conduct, and such superior talents, yet he at least distributed hope and consolation, if only by the probability of purifying the air by causing great fires to be kindled in the streets of Athens."\*

Dr. Cullen defines plague to be "typhus very contagious, with the greatest debility."

\* Thucydides, Plutarch in Pericles, year 226 to 230 before Christ

## CHAPTER XIV.

THE TYPHUS VARIETY OF FEVER FREQUENTLY EXISTS IN THE FORM OF THE WINTER EPIDEMIC, AND IS SEEN IN ALL THE "ITISES" OF DRS. CULLEN AND GOOD.

In the venous congestion, Dr. Armstrong has properly placed one stage of typhus. Here the cause, I suppose, is from the sedative quality of the exciting cause producing a relaxation of the whole sanguineous system, with a diminution of the vis a tergo of the heart. The blood is readily received from the veins by the duricles, which are now in a state of unnatural dilatation; but the heart wants the strength to afford it such an impetus as may carry it through the whole sanguineous system; hence it is disposed to accumulate in the larger veins, as they approach the fountain of circulation.

Strong stimulants, and strong sedatives, when of a poisonous nature, like the extreme degrees of heat and cold, when applied to the system, although they destroy by a different process, produce effects so similar that, without seeing the agent, it is difficult to ascertain which is doing the mischief. Hence the difficulty of dis-

tinguishing an oppressed state of the arterial system, from this venous congestion; and hence the frequent mistakes that arise from confounding a state of arterial suffocation with typhus fever.

If there is a doctrine in medicine which has been superlatively injurious, and more certainly erroneous than any other, it is that which has been so long taught by the most eminent professors, and by nosological writers generally; which goes to establish the truth that, in all fever attended with local affection, the disease is to be regarded as inflammatory, and treated accordingly. To this general rule, I admit, there is now and then, and very lately, an occasional exception. For instance, we read, in the writings of Dr. Chapman, some account of typhoid pleurisy. I repeat it, the doctrine is founded in error, and has produced the most pernicious results in every part of the world where it has been followed. So commonly has this doctrine been believed, that a person seized with fever and pain in his side or breast, generally sent off to a neighbour to bleed him, (for in every neighbourhood there is a bleeder,) lost blood, and frequently thereby his life.

There is too much, and too respectable, au-

thority to be opposed, to allow this doctrine to be done away by the voice of a single obscure individual ; I shall, therefore, introduce other authority, and with it appeal to the candour of every old and respectable physician in the United States, to say whether his own observation and experience does not corroborate the truth of the testimony.

First. Dr. John Clark describes a continued fever, which prevailed in Newcastle, in the latter part of the year 1777, which resembles the winter epidemics of the United States ; in some years it was evidently of typhus character, though possessing many of the symptoms of pneumonitis of authors. He says "the disease began with listlessness, or shivering, sickness at stomach, and universal pains. The pulse, in the beginning, was in general very small and frequent. Upon the invasion, some complained of a cough, stricture and oppression of the breast, attended with slight stiches in the side, and wheezing respiration ; but, for the most part, these symptoms did not appear till some days after the formation of the fever."

When the disease was left to nature, but especially where large evacuations by bleeding were used in the beginning, he says "he met

with too many examples of its fatality. But when the lancet was withheld, and the disease properly treated, few died." Of sixty-four patients, which came under his care at the dispensary, but two died. The only "medicine which proved of singular advantage, was the Peruvian bark."\*

Second. Almost the first patient which I had in the first winter of my practice, was a gentleman labouring under symptoms of pleurisy ; he had cough, difficulty of respiration, acute pain in the left side, and fever. I was then sure that his pulse was not such as indicated bleeding ; but I knew not what else to do, as I had never been taught to believe that there was such a disease as typhus pleurisy. Bleeding was, therefore, decided on ; the gentleman sat up ; his arm was corded, and a vein opened ; the blood ran slowly ; the patient sickened ; the blood ceased to flow ; he fainted, and fell back on his pillow. Reaction was slow in returning ; an anodyne was administered, and after waiting some time he was put on the bark, and continued it with wine and occasional anodynes for several weeks, before he recovered. This case

\* Clark on Fever, page 131, 132, and 133. Also, on Long Voyages, page 176, &c., on Continued Fever.

was, to me, most instructive ; I was ever on the look out for such pleurisies afterwards, and, meeting with them more freely during the following winter, I continued the same stimulating plan of treatment. This practice alarmed the friends of a gentleman to whom I was called ; they were not satisfied with its propriety, and sent for another physician ; the gentleman was bled by this physician, and he died, although I conscientiously believe the first prescription would have cured him. Feeling irritated by the termination of this case, I wrote a short account of the prevailing epidemic, and had it published in the Edenton Gazette, then edited by Mr. Henry Wills, April 15th, 1795, from which I take the following extract : “ The disease I shall term a remitting pleurisy ; it has been somewhat epidemic this winter and spring, and continues to prevail in the district of Edenton. It is ushered in with a violent cold fit, followed by a fever, which remits every morning ; difficult respiration ; distressing, though not acute, pain in some part of the thorax ; turgescence of the cheeks and eye-balls ; the pulse is generally full, soft, and frequent ; a vomiting and diarrhœa, sometimes of billious matter, accompany the first attack of the dis-

ease ; the skin, of a yellowish hue, is always moist, and sometimes bathed in sweat ; cough dry ; tongue of a yellowish colour, and not much furred ; some degree of absence and flightiness attend the mind of the patient during the whole disease. It attacks those principally who labour under indirect debility, from the excessive use of ardent spirits, and those whose constitutions have been impaired by inward fevers. (Febricula of Rush.)

“This pleurisy is distinguished from the inflammatory species, by the objects of its attacks ; by the softness of the pulse ; yellowness and laxness of the skin ; vomiting and diarrhœa, and by the remission of its fever.

“The limits of this essay forbid a theoretical discussion of the symptoms, and even a narration of the combined causes of this formidable disease ; I must content myself, therefore, by presuming the foregoing history sufficiently intelligible to make the complaint known when it appears, and distinguishable from other diseases to which it has some resemblance, and proceed to the cure.

“As this disease has been generally confounded with inflammatory pleurisies, we must not be surprised to find that the cure has al-

ways been attempted with the lancet. This, I am sorry to say, has been unsuccessful in every case where I have known it used. Sometimes it affords to the patient a temporary relief; but soon the difficulty of his breathing is much increased, his strength decreased, and he dies seemingly of suffocation.

“If there is ever any excessive arterial action in this fever, it is so transitory, that all avacuantants are not only uncertain, but unsafe. Experience, late experience, has, however, taught me the use of a remedy which, if early applied, will seldom fail to afford complete relief. It is a remedy of which those who estimate the quantity of blood to be taken, to hold an exact proportion to the topical inflammation or congestion, would never think; a remedy, which, without retrospective views of the habits of the patient, and of the various modes which miasmata acts, would be thought by most inadmissible; a remedy which, without a consideration that topical inflammation can be supported by topical debility, no one would ever suspect. The remedy I mean is no less simple, and no less powerful, than the Peruvian bark. This given in substance, and largely in wine, is the only remedy which can be relied upon with certainty.

“Blisters applied over the pain are also useful, particularly when they are allowed to remain only long enough to inflame, and not long enough to debilitate, the patient by producing copious evacuations. Laudanum is also serviceable ; it checks the diarrhœa and composes the patient, who, without it, is commonly watchful and restless.

“I have no doubt but in this climate the type which this fever assumes is often to be met with in other diseases, which have heretofore been called inflammatory. I have seen it in a catarrh, which was cured by the liberal use of the bark, administered from the commencement and during the whole course of the fever.”

This quotation from an essay written by myself and published thirty four years ago, at a time when I could not be charged with any sinister purpose, may, I think, be now fairly introduced as proper testimony, and fully entitled to full weight in favour of the position which it is intended to support.

Dr. Hugh Williamson, at that time the representative from this district in Congress, happened to be in Edenton at the time of the publication of this essay. He was a man of profound learning, had stood high in his pro-

fession before he left it for politics, was extremely eccentric in his habits and disposition, and might then have been called a "stalking library;" he was, in fact, the first edition of a stupendous work, of which, if I may be allowed the expression, Dr. Mitchell, of New York, may be now considered the second.

The Doctor (Williamson) wrote me a complimentary note on reading this essay, in which he took occasion to observe "it produced much excitement among the men of the lancet;" and I have ever thought,—although, perhaps, erroneously,—that it was this essay which brought to the Doctor's recollection what he had before observed himself on the same subject, an account of which is contained in a letter he wrote Dr. Hosack, dated August, 1797, and which is published in the second volume of the Medical Repository, [pages 145, 6, and 7,] and from which I shall take the liberty to extract such parts as are in point.

After speaking of the autumnal intermittents, he says, "those intermittent fevers disappear as the cold weather sets in, but they are frequently succeeded by fevers of a different type that are much more fatal. Those fevers of the colder season are commonly attended by symp-

toms of partial inflammation, whence they are denominated pleurisies of the eye or head ; at other times they affect the side. In those several forms they are equally dangerous. As those symptoms of pain are attended with a considerable, often with a high, degree of fever, the general practice has been to bleed once and again ; but the patients, by far the greater part of them, sink under the disease.

“ From a detail of circumstances, I have been induced to believe that the fever mentioned is of the putrid kind. It commonly attacks people who have been afflicted by intermitting fevers during the summer and autumn. It appears chiefly, perhaps only, in those places where people are subject to intermittent fevers ; in low sunken grounds, and along the sides of rivers.

“ In the beginning of the winter, in the year 1792, that fever was very fatal in the county of Martin, near the river Roanoake : the river had been lately very low, and much of the muddy bottom, and other grounds usually covered with water, had been exposed to the sun.

“ The pain was then in the head. In the year 1794, ten or twelve men, the heads of families, adjoining one another, died of that complaint in December, on the river Neuse.

They had lived near the high grounds on the north-east side of that river. There had been a dry season, and the winds commonly at south-west. The other inhabitants of the adjacent country, except on that strip near the river, enjoyed good health.

“ In the year 1792, to the best of my recollection, in the beginning of winter, this pleurisy of the head, as it was called, was endemic near Mattimuskeet, in a settlement where the land is rich, but very low, and much of it covered with water. There was but one practitioner of physic in the settlement, and he was a mere empiric. We have little intercourse with people in that settlement, for they are surrounded with an impenetrable dismal swamp, or a broad sound. Inquiring of a planter from that settlement, concerning their population and general health, he told me that 30 or 40 had died on the foregoing winter of a pleurisy in the head. ‘Have you no Doctor?’ ‘Yes,’ said he, ‘we have one.’ ‘Did he not bleed his patients?’ ‘He bled them frequently.’ ‘Did any of these patients die?’ ‘They all died.’ ‘Did you not try in that case to do without the Doctor?’ ‘Yes,’ said he, ‘we left off sending for the

Doctor, we drank our own teas, and the people recovered.'

"I had been told, by a very respectable physician, that he was called, in the course of his practice, to see a negro in Jamaica, sick of a pleurisy. He had a sharp pain in the side, attended with fever. The patient was bled, and died in two days. He was soon called to see two or three other slaves on the same estate, ill of the same disease. He ordered them to be bled, and they all died. Alarmed by this unexpected issue of his practice, he began to look for the cause of a complaint that eluded the lancet, and he discovered a pond of stagnant water to the windward of the huts of the negroes. The lancet was thrown aside, and by the plentiful use of cordials the sickness among those people was removed.

"Facts of this kind have tended to establish the opinion I have mentioned, concerning the fever that is commonly so fatal in North Carolina.

"Two cases only have occurred, in which I had an opportunity of comparing this theory with the corresponding practice.

"While the assembly was sitting at Raleigh, in January, 1795, one of the members, who

lodged at my quarters, was taken sick of a fever and pain in the side. One of the members had lately died of a similar complaint, in three or four days' illness; and the persons above mentioned, on the river Neuse, at no great distance, had died on the last month of a pain that was also in the side. The member last taken ill was from the Pais Bas, and had been sickly in the autumn. The Doctor who was called requested my advice. I advised him to keep the lancet in his pocket; but as the patient complained of headache, a full pulse, and redness in his eyes, a moderate dose of castor oil was administered. The operation was moderate; but the consequent loss of strength in the patient, and depression in his pulse, was more than I expected. A blister was put on his legs. He drank wine whey plentifully, and took an infusion of *serp. verg.* and *cort. peruv.* not very liberally, for he preferred the whey or the wine. He recovered.

“A gentleman of my acquaintance at Edenton, was seized that winter of the same fever. Sundry persons in that town, or its vicinity, had lately died of it. They had been bled as for the common pleurisy, an inflammatory disease. The pain on that winter uniformly

affected the side. The gentleman to whom I refer was taken ill in the night ; he was bled by a Doctor who was called early in the morning. I saw him before ten, and advised to abstain from the further use of the lancet. The patient was a strong man ; but he also had been afflicted in the autumn by an intermitting fever. I wished to see a remission of the fever before the bark was administered. A sufficient perspiration was easily excited. He was twice blistered. He drank wine whey freely, and snake-root tea. On the fourth or fifth day he discharged a little blood, mixed with phlegm, from his lungs. Passing that appearance to the account of a dissolved state of the fluids, I did not hesitate to advise a plentiful use of a cold infusion of the bark. He recovered. I did not hear, to my recollection, a single case that winter of a patient recovering who had been freely bled.

“ As the patients who suffer by the complaint are commonly men, not often women ; and as men expose themselves much more imprudently than women, to the cold and to the rain, there is reason to believe that a checked perspiration is the proximate cause of the complaint. Any fever thus induced, where the fluids are dissolved and in such a state of the atmosphere as

has been mentioned, must soon be expected to put on a dangerous appearance. I have known a man, thus prepared by intermittents, in the season and country mentioned, bring on, by dancing, what was called a pleurisy in his head, and die in forty-eight hours.

“I was assured by Dr. Sawyer, a physician in Pasquotank, about thirty miles from Edenton, that he was called to many patients on the winter of which I have been speaking. He seldom waited, as he declared, even for a remission ; he gave the bark in substance, and his patients recovered. Having business in Pasquotank, I inquired concerning the general progress of that fever, during that sickly season. I was assured by a gentleman there, whom Dr. Sawyer attended, that having a high fever and considerable pain, he took the bark in substance, and thought his fever moderated by every dose. He said that one of his slaves had been treated in the same manner, and with similar effect. He added that another physician in the same vicinity, a man of talents, and well educated, adhering to the bleeding system, while the pain and fever remained, had lost the most of his patients.”

To this testimony I can now add that in

several of the winter epidemics, which were uncommonly violent almost every season, here and in most parts of the United States, from year 1813 to 1819, the fever appeared frequently of typhus character, was sometimes attended with phrenitis, the head pleurisy of the common people, and which is noticed above by Dr. Williamson, as the common name. I have seen it also in the forms of pneumonitis, gastritis, hyppatitis, enteritis, cystitis, and, if not all, the greater part of all, the itises of Dr. Cullen and Dr. Good. I have seen such cases with all the common symptoms of those diseases, except that the fever in the cases to which I now refer was evidently typhus, and was cured, when it was cured at all, by the most appropriate and powerful remedies used in typhus. I have seen those cases in company with Dr. Norcom, a respectable physician of this place, with whom I was long associated in practice; and I have seen them in consultation with most of the physicians with whom I have practised in the district of Edenton. Such cases have occurred in my practice in the winter of the present year, 1829, and I have prescribed successfully in the phrenitis, paristhmitis, cynanchitis, and pleuritis, of the nosological writers, where, with all

these local affections, and sometimes with erysipelas, a typhus fever was the chief disease, and in some cases was so malignant that, when not timely and properly opposed, terminated the life of the patient in six days.

The most dangerous form of the fever is that of phrenitis ; it is accompanied with effusion in the brain, paralysis of some one or more of the extremities, a delirium which prevents the exhibition of medicine, and the most distressing restlessness.

These facts I presume, will be sufficient to satisfy the most sceptic, that the position above assumed, viz. : that the fevers with local affections, and which are considered by the nosological writers to be always inflammatory, is erroneous in fact, and must necessarily be fraught with the most mischievous consequences when carried fully into practice.

## CHAPTER XV.

THE TYPHUS VARIETY OF FEVER FREQUENTLY OCCURS  
IN SMALL-POX, MEASLES, AND THE OTHER ERUPTIVE  
STATES OF FEVER.

The confluent small-pox is universally considered as typhus, and has been so regarded since the days of Sydenham. To the refrigerant plan which he introduced in the cure of that disease, when distinct, and the great success which it had, when compared with the hot treatment which preceded it, may be ascribed the universal adoption of the opinion that the disease, when distinct, is inflammatory, not only when taken in the natural way, but when induced by inoculation. No one ever doubted its correctness ; no one ever adopted, in any case, a different treatment : yet, by inoculation, death frequently happened ; and, by the natural way, small-pox has been regarded as amongst the most fatal diseases. I have, myself, been long satisfied, both from my own practice and from what I formerly noticed in others, while inoculation was practiced, and before the introduction of vaccination, that many cases of death hap-

pened from pursuing this plan of treatment too far. I believe, now, that many cases of death occur from following it at all. It is not otherwise to be reconciled to the nature of disease, how it has happened in Canada, lately, where they have had the disease so severely that three fifths of the number attacked died. The number of deaths, by this disease, although bearing a smaller proportion, in the United States, to the number of cures, goes clearly to shew that the plan here has been followed too far, or with too little discrimination. A few cases which came under my own observation in this place, in the fall of 1827, have not only confirmed me in this opinion, but convinced me beyond a doubt that the small-pox, in its mildest and most distinct form, is sometimes, if not frequently, typhus. A lad, belonging to a respectable and numerous family in Edenton, went on board a vessel to New York; before his arrival home, but after he had crossed Occacoke Bar, he was sick: on his arrival home, perhaps the third day of his fever, I visited him; he had never been vaccinated, but he had not been known to have been exposed to small-pox contagion; his fever, from his appearance when I saw him, and from the best history I could obtain of it, appeared to

be a remittent of typhus character, and such as was then prevailing in the district where I practised ; my other patients were taking quinine, wine, brandy, and opium, as well in the fever as in the remission. These medicines were prescribed for him, and he pursued the same plan until an eruption appeared on his skin, which I soon pronounced the small-pox. After the appearance of the eruption, he remained weak, the same practice was continued, and he recovered without difficulty, and without marks of the disease. From this boy several of the family caught the disease, and by some means it was scattered and made its appearance in different parts of the town. Some, who had been vaccinated, had what is called varioloid, a disease resembling the small-pox in every respect except that the pustules do not scar or pit, but disappear suddenly, the matter forming a powder, and dropping off : in the fever there is no difference in form or violence. In the whole number of cases there were sixteen or seventeen, of which three were varioloid ; the whole of which were subjected to the same treatment, except a negro woman, to whom her mistress gave a dose of salts, and whose case was not promptly attended. The whole number recovered, not one

of whom, except the negro woman, was ever considered in danger ;\* and the whole of whom, including the negro woman, took quinine, or bark, with wine and toddy, during the whole disease, without regard to the exacerbation or remission of fever. Only two, except the negro woman, (whose face remains badly marked) were pitted, or at all disfigured by the disease ; and they all had every symptom of typhus fever. It may not be improper to add that the chambers of the patients were kept properly cleansed, and they were supplied with fresh but temperate air.

Of measles I have not myself noticed more than one case, which was decidedly typhus : such cases have, I believe, been noticed by Sydenham, and called by him "black measles ;" the case which I saw myself was very violent, attended with great prostration, and resembled what is generally termed malignant typhus. Judging, however, from analogy, I feel disposed to believe, and entertain but little doubt, that the

\* I have been since informed by my son, who assisted me in attending these cases of small-pox, that one of the patients, whom I did not visit, had taken salts previously to his attendance. This man, (a negro) in the early stage of the disease, was denied the necessary tonics by his master, and was thought, at one period, to be in a very critical situation ; but, by the free use of bark, toddy, and nourishment, he recovered. This patient was worse marked by the disease than any other, except the negro woman.

disease, when raging as an epidemic, is sometimes typhus and typhoid, but most frequently inflammatory. In whatever grade of fever it may appear, there is much difference in the violence of attacks : when attacking the breast or bowels, it is frequently dangerous ; and in the latter form there has been no treatment with which I have succeeded so well in curing it, as with opium, quinine, toddy, and a diet of milk and farinaceous articles.

## CHAPTER XVI.

## OF MISPLACED OR DISGUISED STATE OF FEVER.

Many diseases are already admitted under this head ; I shall, however, take the freedom of adding three others, viz.: jaundice, phlegmasia dolens, and last, though not least, *the gout*.

Misplaced fever is of the summer epidemic, and has been recognized as such by authors, and very properly considered as misplaced intermittent. Different names have been assigned to the different forms, but as they have been admitted to be misplaced intermittents, it will require no particular investigation to establish the position.

The nature of these forms of disease which have been thus classed, including those now added by myself, is similar to that of the common form of fever. When developing itself in the blood-vessels it occasionally partakes of the three varieties of fever, and the state of the system is to be ascertained precisely in the same way that it is when the febrile symptoms have been fairly developed in the ordinary fever. Most, if not all, of them, are accompanied with

an irritative or secondary form of fever ; in which event the excitement of the blood-vessels, the appearance of the eye, and of the other features of the face, afford the same means of forming a correct judgment as they do separately or combined, in the primary form of fever ; and the cure depends upon the same general principles, of which I am to speak particularly hereafter.

That the jaundice is a misplaced form of fever I infer from its happening most generally in autumn, during the prevalence of that miasmata so necessary to produce intermittent and remittent ; from its frequently being the finale of a neglected or ill-treated intermittent ; and from its being epidemic. I am not disposed to believe that this disease is often produced by stones obstructing the biliary ducts, for I have never seen any discharged by vomiting. I rather think the miasmata,—when it fails to produce fever by operating directly on the blood-vessels,—produces this disease, either by occasioning a stricture or spasm on the gall ducts, or causing such a vitiated secretion of the bile, by its specific operation on the liver, that the bile becomes too thick and glutinous to pass the common outlet from the bladder ;

hence producing obstructions in the ducts, and an absorption of bile into the system, which tinges the skin yellow and gives the same colour to the secretions.

The phlegmasia dolens is a tumefaction of one or both (most generally only one) of the lower extremities, and is confined to lying-in women. The cause or nature of the disease seems to have been not well understood; and the methods of cure have been so various and unsatisfactory that it must be apparent, to all who have sought information on the subject from medical writers, that their search has been unavailing and unprofitable. As far as my experience has gone, I have noticed it to attack lying-in women, generally, in the fall or winter, and particularly such as have been exposed, during pregnancy, to the cause which produces intermittent or remittent fever. The fever is one of irritation, and, I believe, is produced by miasmata acting on the *lymphatics* of the thigh or leg, instead of on the blood-vessels, as happens always in primary fever. It may, like consumption, be postponed by pregnancy, (which is always a disease) and developed after parturition. Although a fever from irritation, it is subject to the common law of

irritations, and appears in the different varieties of fever common to miasmata. This state of fever is to be ascertained by the rules already laid down, and the cure will be readily perceived when the true state of excitement is known. It is to be cured by general treatment, with such local applications as the state of excitement may indicate. I wish here to be distinctly understood that the local treatment of every disease which requires such treatment, follows necessarily and absolutely the same plan which is indicated by the symptoms for the general treatment, and that any other course affords no relief, but generally aggravates the local symptoms.

The gout is a disease of such general prevalence, and will require and receive so many remarks, that, although I have classed it under the head of misplaced fever, I shall, nevertheless, give it that space which its importance deserves, and consider it in one or more distinct chapters.

## CHAPTER XVII.

## OF THE GOUT.

The gout has been compared, by Dr. Rush,\* to “a monarch whose empire is unlimited.” He might have added, it has tyranized over the greater part of the civilized world, from the most early history of disease to the present day. No one has dared to dispute its legitimacy, or to obstruct its rule. The ancient Romans, in many cases, preferred death to submission to such tyranny, and left the world rather than bear the pain and sufferings inflicted by the cruel monster. — Thousands of the moderns, less heroic, or more patient than the ancients, have hugged their chains of flannel, begged for patience, and kissed the rod that chastised them ; while still a larger number are crouching before the tyrant, repenting for real or supposed crimes, and endeavouring to avert his vengeance by leading a new life : vain and fruitless have all such humiliation and supplication proved. Like the old *Lettres de Cachet* of the French, it visits alike

\* On Gout.

the innocent and the guilty ; and has been supposed, by most physicians, even to visit the sins of the fathers upon the children.

To attempt to rid the world of a tyrant possessing such absolute and unlimited sway, and producing such general distress by its exercise, is surely laudable, and, if complete success should not follow in his dethronement, we trust he may be hereafter confined within constitutional limits. I feel fully apprised of the hazard of the enterprise in which I am engaged, but, buoyed up by the example of others in the political world who have succeeded in the destruction of despotism, and restored liberty to their country, I enter upon the adventure with the zeal of a patriot. If I succeed, I shall, like Brutus, enjoy immortality : if I fail, I must encounter the usual peril of rebellion and innovation. But, to cease metaphor, the gout, though last in the arrangements of my treatise, from its importance ; from the various views taken of it by medical writers ; from the contradictory systems published on the subject ; and from the unsettled opinion in the whole medical world, of the cause and proper treatment, deserves the most mature consideration. There is no system, heretofore published, which has tended, in the

least, to mitigate the suffering from this most painful disease ; there has been no plan suggested calculated to prevent its occurrence, and the miserable object who has once had an attack, looks forward to its recurrence with the most dreadful anxiety, and when it seizes him, he is committed, by the most safe practice of all the earlier writers down to Dr. Cullen, to “patience and flannel :” thus hugging his chains, and suffering pain periodically once or twice a year, he will be most fortunate if he is not driven to frequent bleedings, or to the excessive use of opium, or ardent spirits, which, while they produce for him a temporary relief, serve to strengthen his fetters, to rivet them the more firmly around him, and to render him less able to bear them.

The term used for this disease by the Greeks, was arthritis, (a joint) and, under this term, as a general head, they considered all diseases of the joints. Dr. Good employs the term arthrosia, which has the same signification as the former ; his object in doing this, was to restrain the termination *itis* to his different species of empresma ; but it seems to me that it would have been better, in a system like his, to have retained the original Greek word, and he then

might, by a proper addition, have made his favourite term *itis* not only pointed to the locality, but shewn also that the disease was inflammatory ; thus, by adding his termination to Dr. Cullen's favourite term for the disease, he would have produced *podagraitis* when in the feet, *charagraitis* when in the hands, *onagraitis* when in the elbow, &c.

I object, however, to the term *arthritis*, or *arthrosia*, because the disease is not confined to the joints, but is, on the contrary, a disease which invades, by turns, every part of the system ; it has, for this reason, been called, by Drs. Rush and Good, the morbid *Proteus*. First, it attacks the head, producing head-ache and apoplexy ; second, it produces inflammation, with electric sparks from the eyes ; third, it affects the ears with internal pain, and external swelling ; fourth, it produces eruptions on the skin ; fifth, it attacks the stomach and bowels, producing colic, spasms, and diarrhœa ; sixth, it attacks the liver ; seventh, the bladder ; eighth, the kidneys ; ninth, the rectum, and various other organs and members of the system, producing such diseases as commonly occur in each part, and to which they are subject from other causes ; tenth, it produces, moreover, in-

flammation in the muscles; for, from this cause, motion is painful, and the muscles are frequently swollen and painful to the touch ; eleventh, it produces blennorrhagia, which is contagious, occasioning thereby great distress in families ; twelfth, it produces inflammation in the neck of the bladder, and in the urethra, without running ; inability to retain but a short time the urine, which is discharged with heat and great violence. This disease is, I presume, the same as treated by Swediaur and other writers, under the name of dry gonorrhœa, and for which they propose no cure ; it is a most painful and distressing form of the disease, and requires absolute rest and blisters to cure it. Thirteenth, it affects the blood-vessels by causing fever, which terminates by effusions of coagulable lymph, and forms calcareous matter in the joints, cellular membrane, and kidneys. This fever sometimes produces dropsical effusions, and sometimes cerum, which is converted into pus, and forms abscesses in various joints of the system. Fourteenth, it attacks the tendons and ligaments of the joints, and even the bones themselves, producing lumps, contorsions, and even fractures. For the truth of this position, I need only refer to the observations of every physician who is

conversant with the gout; but I refer particularly for most of these forms to the observations of our illustrious countryman, Rush, (in his *Treatise on the Gout*) who supports this opinion, not only by his own experience, but by quotations of cases from several respectable authors. I might refer, also, to Dr. Good,\* himself, who affords abundant evidence that gout is not always an *articular inflammation*.

It has been the fashion to call gout, other than that in the extremities, repelled or misplaced gout: thus may be seen, gouty phrenitis, gouty pneumonitis, gouty gastritis, gouty enteritis, gouty nephritis, &c. This is an error in arrangement: the attack of gout is frequently primary in some one of these various forms; and there is no form of the disease more common than nephritic gout. It goes, however, to confirm the opinion, before advanced, that the term is too restricted for the disease to which it is applied; and to convince the reader that it is really a Proteus, and assumes almost every form of fever known amongst nosological writers, as well as other diseases considered local. It serves, moreover, to prove the impropriety of

\* Vol 2, *Hæmatica*.

calling that repelled or misplaced which began first in some internal organ. As well, and with more propriety, might we call that a misplaced or repelled gout, which happens in the foot immediately after an attack in an organ. There is nothing more common, according to my experience, than to see the podagra of Dr. Cullen follow a case of nephritic gout.

I object to the term podagra, which is used by Doctors Boerhaave, Hoffman, and Cullen. It is derived from *pes*, (the foot) and was probably used by those authors because they considered the foot as the seat of the idiopathic gout. This term is more objectionable, because more restrictive in its signification than arthritis; and all the above objections offered to a continuance of that term, will apply with greater force to this. It will besides be found inapplicable, by Dr. Cullen's own shewing. In his History of the Gout,\* he says "it is a disease of all the joints."

Dr. Cullen divides the disease into "*regular, atonic, retrograde, or recedent, and misplaced gout*," clearly admitting that, so far from being a disease of the feet alone, the whole of the

\* First Lines.

joints are subject to it ; and that under different forms and disguises it invades most parts of the body. Not always receding from the foot, but being sometimes *atonic*, “when there is manifestly the gouty diathesis ; but from some cause does not produce the inflammatory affection of the joints.”\*

Also, in his misplaced gout, when (to convey his meaning) “the gouty diathesis produces inflammation in some internal part instead of in the joints or the extremities.” Thus, then, it would appear that the gout, like the other misplaced intermittents, may shew itself by attacking severally the different parts of the system, so that “the whole body crouched before it.”†

It is unnecessary to enter farther into the history of this disease, as it may be found in most systems of medicine.

Dr. Cullen considers the regular gout as an inflammatory affection, and arranges it under class febres, and the order phlegmasia, of which he makes the genus podagra, in preference to arthritis, as he thought it more characteristically marked the disease. He defines it, in general, “an hereditary disease, arising without any

\* First Lines.      † Rush.

evident external cause, but most commonly preceded by unusual affections of the stomach, febrile symptoms, pain chiefly seizing the great toe, but certainly the joints of the hands and feet; returning at intervals, and often alternating with affections of the stomach and other internal parts.”†

I have already objected to the terms arthritis, arthrosia, and podagra; here are furnished, by the Doctor himself, further objections, by his own shewing. If the disease affects the hands it cannot be podagra, which has been already shewn to be derived from *pes*, (the foot) and is applicable alone to the feet. When it alternates, as above stated in the definition, with the stomach and other internal parts, the objection is equally strong, and for the same reasons. This definition is objectionable on another and very important score; he makes the febrile symptoms to precede the pain, in doing which he has destroyed the unity of his system, for in his order of phlegmasia he ascribes all fever to the irritation produced by pain. It is, however, incorrect; the pain is the first symptom, often commencing when the subject is asleep,

\* Synopsis Med.

and after he had gone to bed in perfect health. The irritation from pain generally produces some chilliness, which is followed by heat. The fever is, therefore, secondary or irritative, the effect entirely of pain, and not, as the Doctor would have us believe, a cause of the pain.

I object also to all its hereditary character ; in this objection I have the concurrence of Dr. Brown, who says that if a son succeeds to his father's estate, and to his good living, he is apt to succeed also to his gout, but not otherwise. It has heretofore been considered that the gout was produced by idleness and intemperance ; Dr. Brown, with all his contemporaries, as well as those who succeeded him to the present time, have entertained no other belief : " hence," says Dr. Cullen, " arising from no evident external cause." Having assigned to the disease a different origin, I would say where the son succeeds to his father's residence, if his father had the disease, whether he succeeds to his good living or not, he would be apt to succeed to his gout.

Dr. Good, who surpasses Dr. Cullen in nosology, places the gout in his class, hæmatica ; order, phlogotis ; genus, arthrosia ; and species, podagra : his definition varies little from that of Dr. Cullen, except that in his species, podaga,

he adds that "it is unsuppurative." This part of the definition is not true : Dr. Rush states, among other terminations of the gout, that of "suppuration."

## CHAPTER XVIII.

## THE NATURE AND DEFINITION OF GOUT.

I prefer the term gout to any other which has been used to denote the subject now under consideration. It is more broad in its signification, it is better understood by people generally, and equally well understood by physicians; it has, besides, an origin similar to rheumatism, which I believe is the same disease. Among the ancients most diseases accompanied with swelling, were ascribed to a flow of some morbid fluid or humour to the part affected, and called a rheum or defluxion.

The discovery of the circulation of the blood has enabled the moderns to account more satisfactorily for these tumefactions. The Arabian writers ascribed this cause to various affections of the eye; hence are called, and still retained, by surgeons of the present day, *gutta serena* and *gutta obscura*, clear or cloudy drop. The terms gout and rheumatism were alike attributed to the same origin, were used in medicine synonymously, both importing defluxion. The old opinion has descended with the terms; and

as I believe they are still one disease, and have a common origin, I cannot think there is any necessity whatever for changing them, or adding separate names merely for the purpose of designating the particular part of the body to which the disease is attached. The fever produced by it is one of the whole system ; and the local affection has no control over the species to which it will be found to belong. It is attended with swelling, and frequently with effusions of lymph in the cellular membrane and joints, and from this prominent symptom in the disease has it derived its name.

The gout,—or goute, as the French have it,—I would define a painful disease, affecting, at times, singularly, every part of the system ; but is most apt to seize the extremities, frequently changing its locality, exciting fever from irritation in proportion to the violence of pain ; and the fever so excited belongs sometimes to the inflammatory, sometimes to the typhoid, and sometimes to the typhus species, according as these are designated in the foregoing arrangement.

The truth of this definition will be apparent from consulting the writers whose systems embrace gout. Dr. Cullen, Dr. Good, and Dr.

Rush, all admit that it is a painful disease, and one accompanied with fever. I have ventured to confine the fever to one from irritation ; in this it affords me great pleasure to have the sanction of Dr. Cullen's high authority. He places it in his order of phlegmasia, as has been already stated, all of which order, according to the Doctor himself, derive the fever from the local irritation.

Dr. Brown contends that all gout is asthenic ; that he had cured himself frequently with wine and brandy, taken freely in the paroxysm ; that there was no other species of gout ; and supports his opinion by stating that amongst the many who had contended for sthenic gout, not one of them had ventured to bleed in it.

In this opinion Dr. Brown was certainly mistaken. His cotemporary, Dr. Cullen, and many before him, among whom were Doctors Lister and Hoffman, in certain symptoms of the disease, recommended bleeding. In rheumatism, which I believe gout, they have all been extravagant in the use of the lancet ; so much so that even Dr. Sydenham himself, who out-bled any physician except Dr. Rush, had doubts whether the practice was not carried too far, and recommended large potations of whey,

in preference to the indiscriminate use of blood-letting.

To the practice of taking wine and brandy freely during the paroxysm of gout, it was thought Dr. Brown had fallen a victim. I can readily conceive how that might have happened, and yet reconcile, in many cases, the propriety of his practice. In the variety of gout to be hereafter classed typhus, the wine and brandy may be taken, not only with safety, but with great benefit; it is that variety which Dr. Brown calls asthenic; his death must have ensued from using the wine and brandy in the inflammatory variety, which he terms sthenic, and contended did not exist; his untimely death should be satisfactory that the Doctor's opinion was incorrect.

## CHAPTER XIX.

## ARE GOUT AND RHEUMATISM THE SAME DISEASE?

It has been already stated that the ancients included under the term arthritis all the diseases of the joints ; and that they had therefore made no distinction between gout and rheumatism. They wrote from nature, were not interested like the moderns to multiply and mistify, and make diseases to fit all ages and classes of men ; to create more than three hundred fevers out of one simple disease, and thus reduce the noble science of medicine to a level with the manufactories, which are constantly engaged in multiplying fabrics to suit the fashions and caprices of all fashionable and capricious customers.

In the distinctions drawn by different writers between gout and rheumatism, the lines have not been sufficiently parallel (according to my comprehension) to convince me of any real difference ; but, on the contrary, the lines become constantly nearer each other, until they come in contact. These writers have moreover contradicted each other ; and while one lays down an unerring rule, another shews the rule appli-

cable to either disease. Thus, Dr. Cullen says, "the two distinguished by observing the predisposition, the antecedents, the parts affected, the recurrences of the disease, and its connection with other parts of the system ; which circumstances for the most part appear very differently in the two diseases." What the difference is in these circumstances, the Doctor has failed to point out to the reader. "The predisposition, the antecedents, the parts affected, the recurrences of the disease, and its connection with other parts of the system ;" and even it might be added the symptoms will appear precisely the same, in the writings of every eminent author who has treated of them as different diseases.

Dr. Parr, who seems to have summed up the evidence, shewing the supposed difference between the two diseases, admits that they are sometimes mixed.

He says "the gout, in its relation to rheumatism, is a subject of considerable importance, often occasions much difficulty, and though we consider it perfectly distinct, yet they are sometimes so blended and combined as to prevent our seeing which is the principal complaint. In general, rheumatism occurs in consequence of an evident external cause, as cold ; gout is

preceded by languor, flatulency, and indigestion ; rheumatism is the disease of the strong and active ; gout of those advanced in life ; rheumatism attacks the larger ; gout the smaller joints ; rheumatism limbs, though swollen, are not *red*, like gouty ; and rheumatism is not attended with fever so decidedly remitting." Vol. 2, p. 285.

Unfortunately, Dr. Parr has not given references for the facts here stated ; and, without attempting to impeach his testimony, it will be satisfactory to mention that his statement, if not contradicted, is opposed by innumerable facts. Dr. Sydenham (vol. 1, page 475) says, "I was called, *last summer*, to a Mr. Malthus, an apothecary, who was afflicted with severe rheumatism, accompanied with the following symptoms : during the first two days he was attacked with a lameness in his hip, which was succeeded by dull pain of the lungs, with a difficulty of breathing, which likewise went off in two days, then he was seized with a violent pain in the head, and soon after with a pain in the right hip, which was first attacked, and afterwards almost all the joints of the legs and arms were affected by turns, according to the nature of the disease. As he was of a weak and dry constitution, I was apprehensive that by taking away

too much blood his strength, which was already declining, might be quite exhausted, especially as the summer was so far advanced," &c.

This case is important in several of the points of distinction made by Dr. Parr : first, there is no evident exciting cause ; at least, none related by Dr. Sydenham, and so far from cold being charged as the cause, the case occurred in the decline of summer, the very period we should be most apt to expect gout. Secondly, rheumatism, says Dr. Parr, is the disease of the strong and active ; here Mr. Malthus, the subject of Dr. Sydenham's case, "was of a weak and dry constitution." In this case, too, we find the rheumatism, like the gout, attacked the hip, the lungs, and almost all the joints of the legs and arms ; did not, as Dr. Parr says, confine itself to the larger joints. Dr. Good says (vol. 2, page 327,) "there is no joint, except perhaps the extreme and minute joint of the toes and fingers, but is susceptible of its attack. Sometimes it darts internally upon organs we should little expect, as the diaphragm and the pleura ; and I have occasionally known the stomach as suddenly and severely affected as in the gout. It is also said at times to pitch upon the heart and the intestinal canal, and to produce excruciating

torture in both these organs." Dr. Sydenham, in a short account of rheumatism, (Wallis', vol. 2, page 416,) says, "a violent pain sometimes seizes one limb, sometimes another, but especially the wrists, shoulders, and knees, leaving a *redness* and swelling in the part last affected." All authors which I have consulted, concur in this fact of *redness*; and they are equally positive in the affection of the fingers and toes (by which are to be understood the small joints) in chronic rheumatism.

As to the gout being more decidedly remittent than rheumatism, it is to be presumed that whether they are the same or different diseases, there are hardly any two cases of either which remit exactly in the same way. They are both admitted by Dr. Parr (page 285) to remit, and the same admission is made by all writers who advocate the negative side of this question. Dr. Parr is supported by Dr. Good in saying that "rheumatism is not attended with fever so decidedly remitting:" yet, as I have said above, it is the fact in almost every case of remittent fever, even in the same patient, in some paroxysms the remission is much clearer than in others. Those dyspeptic symptoms relied on as constituting a difference between the diseases,

may be regarded rather as an effect of either disease, than as a symptom ; whenever a person is confined and prevented by disease from active exercise, the digestion becomes impaired, he is frequently troubled with eructations and other symptoms of dyspepsia ; and this is the case where that healthy exercise has been prevented by the loss of a limb, by sheer indolence, or any cause ; where, however, the gout has not been so violent as to produce long and frequent confinement to the house, gouty people are as free from dyspepsia as others ; they enjoy, in the absence of disease, not only fine appetites, but fine spirits, and are most frequently attacked in the night without any premonitions whatever.

It is apparent, from all the writers on gout and rheumatism, that a very close connection exists between the diseases ; so much so that Dr. Good [vol. 2, page 326] admits he had a patient labouring under a violent fit of gout, brought on by lumbago, that she suffered under both diseases at the same time, both running their course conjointly. Why not admit it to be gout at once ? He says, on the same page, " it is a striking fact that one of the severest illnesses that attacked Mr. Hunter's own person, and ultimately proved to be disguised gout, he suspected,

on its onset, to be a rheumatic ailment." Dr. Rush says [vol. 2, page 234] "the ligaments which connect the bones are the seats of what is called a legitimate or true gout. They are affected with pain, swelling, and inflammation. The pain is so severe sometimes as to be compared to the gnawing of a dog. We perceive here the sameness of the gout and rheumatism. Many pages, and indeed whole volumes, have been composed by writers to distinguish them, but they are exactly the same disease while the morbid actions are confined to this part of the body." If they are exactly the same disease when confined to one part of the body, why are they not the same disease, I would ask, when they are confined to other parts of the body? They have been alike charged with invading every part of the system with precisely the same symptoms, why then make them separate diseases? The same author says, [page 251] "if by gout we mean a disease which consists simply of morbid excitement, (invited by debility) and disposed to invade every part of the body, we confine our ideas to facts, and thus simplify theory and practice in chronic diseases."

It will be found that the definitions of both diseases, if not in the same words, convey no

distinctly different ideas : all admit that the gout seldom suppurates, and the same of rheumatism ; all admit that both diseases are painful ; that they are both subject to recur ; that they both have fever accompanying the pain, which is of remittent character ; that each disease affects every part of the system ; that each changes its locality ; that each produces swelling and redness ; and so of all other symptoms. Dr. Page, of Richmond, who obtained a premium for a very ingenious Treatise on Gout and Rheumatism, published in the thirty-fifth number of the Medical Recorder, seems to have condensed all the learning of the ancients and moderns on these subjects. He supports the modern opinion of the difference between the diseases, but admits that " the gouty diathesis is also a fruitful predisposing cause of rheumatism ; and on it is established that form of disease to which the term rheumatic gout is applied." Thus Sauvages, and some other nosologists, " from the close connection between gout and rheumatism, distinguish some of the cases of disguised gout by the name of rheumatic gout." To this name I should have no particular objection myself, provided it extended to plain open cases without disguise ; then might we possess a name less

unpopular than gout, and one that would suit all ages, sexes, and classes. And we might, like some of the brotherhood of the type when they form a copartnership in newspaper establishments, retain the name of both old papers in the new firm.

To conclude, the ancients, supposing all arthritic diseases to have a common origin, treated them as one and the same disease. In this they followed nature. With the divisions and subdivisions of the moderns, there is no unerring difference between the diseases ; they are frequently confounded by the most accurate observers ; and the cure, the most important consideration, is so precisely the same that there is no sort of necessity whatever in attempting to sustain a difference which at best seems to me to be imaginary and useless. The fact of the case is this : the moderns have derived gout from no evident external cause ; they have made it hereditary ; they have made the exciting causes to consist in idleness, intemperance, and excesses of various kinds ; they have in many cases been unable to trace this hereditary predisposition, this idleness, this intemperance, and this excess of any kind ; they have found the disease in the industrious, the temperate, and the

labouring classes of the community, in which all the causes to produce gout were wanting ; their patients of course would never agree to be treated as gouty ; a degree of odium is attached to the causes producing the disease, which none but the rich and voluptuous will admit ; hence the expression, rheumatism, you have the rheumatism, you have taken cold, you have strained yourself too much ; while the patient, nothing loth, admits the whole to be true, although it may be in the midst of summer, and he probably has not overstrained one of his muscles in twelve months. So that upon the whole, while the rich voluptuous gentleman and lady are confined with one disease called gout, anthrosia, or podagra, the plain living industrious man and woman are confined with precisely the same disease, which, to suit them, is called the rheumatism.

## CHAPTER XX.

## GOUT A DISGUISED OR MISPLACED INTERMITTENT.

It will be perceived, by the foregoing arrangement, that I have ventured to place gout in a class of diseases known as misplaced intermittent fevers. There are a number of diseases so classed and considered by common consent of physicians ; but how or by what authority they obtained that consent, it is not in my power to say. My own consent thus to place the gout, a disease heretofore holding the first rank and considered of the first importance in the medical world, will be but poor authority ; yet, I can give no other authority, and however satisfactory the reasons may have been to my own mind on that subject, I fear they will not be of sufficient weight and authority to convince my medical brethren. I must, however, beg their indulgence, and desire them to ponder well on the subject, and endeavour themselves to recollect some facts which may be calculated to elucidate and strengthen the position here taken.

It is a law of the animal system to resist the effect of poisonous or hurtful substances applied

to any particular part of the system, until a degree of insensibility is produced in the part acted on, and they cease their injurious operation. Hence acclimation. A person brought up or residing long in an unhealthy climate, becomes less liable to have fever from miasmata than one not accustomed to such residence, and if he should receive the infection the disease is apt to be more mild in character, and less fatal in its termination.

The gout is not a disease of infancy ; to this I admit there are some exceptions, although Dr. Heberden says he never knew a case before puberty. The exceptions are not sufficiently numerous to destroy the general rule. Infancy, youth, and manhood, till the age of thirty-five, are the periods of life, above all others, most subject to intermittent fevers. A year seldom passes in a sickly southern climate without the two first classes being the victims of one or more attacks of intermittent. After manhood the disease is less certain in its annual autumnal visits ; the blood-vessels are becoming less sensible to the morbid agency which produces it, and he sometimes escapes several years without any attack, until at or after the age of thirty-five, the blood-vessels are so insensible to the

operation of the agency, as to resist it altogether. There is then no display of direct morbid excitement in the blood-vessels, it occurs in a shape more ambiguous, it has been called "disguised or misplaced fever," and constitutes those diseases where, in the language of Dr. Rush, "the infection appears to pass by the arterial system, and to fix upon other parts of the body." Here have I ventured to fix the gout, and thus, by degrading the unlimited monarch from the primary diseases, to unrobe if not destroy him, and place him in that grade of evils to which I trust he will be found to belong.

In this attempt I am well aware that I have disregarded all that has been said or written on this disease ; that I risk the ire of all those whose systems have made it different from rheumatism, who have made it hereditary and to come into existence without any evident external exciting cause. It may, however, be pleaded in extenuation of this attempt at innovation, that the gouty community is to lose nothing if it does not gain by my temerity ; "for there is no disease," says Dr. Good, "to which the human frame is subject, that has led to such a variety of opinions, both in theory and practice, many of them directly contradictory to each other, as the gout ;

there is no disease concerning the nature and treatment of which physicians are so little agreed ; so that to this moment it constitutes perhaps the widest field for empiricism, and the hottest for warfare, of any that lie within the domain of medical science."

" Is the gout a local or a constitutional affection ? is it a spasm or a poison ? is its course beneficial or mischievous ? should its inflammation be encouraged or counteracted ? is it to be concentrated or repelled ? is it to be treated with cordials or evacuants ? with cold or with heat ? with a phlogistic or an antiphlogistic regimen ? No sets of questions can be more repugnant to each other than these are ; and yet there is not one of them but we may obtain an answer to either in the negative or in the affirmative, by applying to different practitioners for this purpose." Vol. 2, page 336.

## CHAPTER XXI.

## MIASMATA THE ONLY CAUSE OF GOUT OR RHEUMATISM

The inhabitants of Japan, Dr. Rush says, have much of the gout. He ascribes the frequency of the disease there, to the use of tea; but in this I think the Doctor is mistaken. In China, where it is said, by Drs. Rush and Good, the disease does not exist, the use of tea is certainly as common as in Japan. I charge the frequency of gout in Japan, and every other place where it exists, to the abundance of miasmata, which I contend is the only cause of gout and rheumatism, which are one and the same disease.

Japan is situated in the East Indies, between thirty and forty degrees north latitude. In this empire or kingdom, which comprehends three large islands, Mavor says,\* "nature has been prodigal of her treasures, such as grain, fruit, vegetables, pasturage, tame and wild animals, including even elephants.

\* Vol 12, pages 8 and 9.

"The summer is prodigiously hot, and the winter cold in an equal extreme. During summer, the thunder storms are terrific, and accompanied by rain that falls in torrents." Speaking of the virtues of the inhabitants, he says,\* "the Japanese are modest, patient, civil, docile, *industrious, laborious, punctual* to their word, detest all fraud, are attached only to innocent pleasures, and *abhor gluttony, drunkenness, and indecent conversation.*"

This extract goes to shew that, while in Japan there are all the causes to produce an abundance of miasmata, such as heat and moisture, vegetables, fruit, pasturage, and animals,—and which cannot fail to produce it in the summer season,—the inhabitants are free from idleness, intemperance, gluttony, and all the causes which have been heretofore assigned for the gout: so that in the absence of every cause supposed to be calculated to produce a disease such as gout, and one which exists so commonly in that country, it becomes evident that some other cause must be assigned which is more probably true. Is it not then more reasonable, even with this solitary fact, to look to miasmata as the

cause, which it is evident must exist in abundance, (from the combination of all the causes necessary to its production) than to continue the belief in causes which authentic history affirms do not exist ?

Secondly. In China the gout does not exist. Dr. Good states this fact from respectable French authority. If tea was a predisposing cause of gout, and produced it in Japan, why does it not have the same effect in China ? The fact is, that China, while it is the best cultivated country in the world, is the oldest and most densely populated, so much so that every acre of ground in the empire, which is not covered with houses, roads, or canals, is used for the production of the subsistence of the inhabitants, and of such animals as they suffer to live, and which contribute either to the use or the subsistence of the immense population which covers the country. To make it the more productive, all the filth, dirt, and every other thing which is calculated for the support of vegetation, is daily carried from Peking and the other cities in the empire, to the outside of the walls, where it is deposited, and thence transported forthwith into the country for agricultural purposes. All articles of that description deposited on the canals or

road sides, are immediately removed and converted into the food of plants.\*

“China,” says Mavor,† “extends through so many degrees of latitude, its climate must vary accordingly. It is in general temperate, yet the high mountains towards the north are covered with snow, which renders the cold very severe for three or four months. The southern parts experience a greater or less degree of heat according to their vicinity to the tropic; but this is rendered tolerable by the many grottoes, groves, and cooling shades, to which the inhabitants retire during the middle of the day, when there is the same universal silence and cessation from business as at midnight. The soil is almost every where fit for tillage, and the industry of the natives has converted the *whole* of it into fertile fields, by draining marshy grounds, confining overflowing waters, covering with earth barren rocks, and forming mountains into hanging gardens: every spot of that vast empire is supposed to produce sufficient to maintain its inhabitants, thus rendering the whole country populous, healthy, and opulent.”

China is the mother of tea, yet we have no

\* Barrow. † Vol 11, p. 301.

gout there; the marshes are all drained and converted into fertile fields; there is no source for miasmatic exhalation; there is no causes to produce summer diseases,—gout of course is absent.

Dr. Rush\* says, “sometimes gout is said to combine with the fevers which arise from cold and miasmata. A billious diathesis in the air so often excites the peculiar symptoms of gout in persons predisposed to it, that it has sometimes been said to be epidemic.” This was the case, Dr. Stahl says, in Vienna, in the years 1782 and 1784. The same mixture of billious and gouty symptoms was observed by Dr. Hillary, in the fevers of Barbadoes.

The intimate connection between gout and intermittent and remittent fever must have been so apparent, to every practitioner of observation, that I am astonished that they have so long remained as distinct diseases; and been considered as having different origins. Dr. Sydenham on the epidemic diseases from 1675 to 1680, in his concluding remarks on rheumatism,† has not overlooked this connection. He says, “it must be noted here that in this con-

\* Vol. 2. p. 249, 250.    † Vol. 1. p. 479, and 480.

stitution I have met with a certain symptom at one time resembling the rheumatism, and at another time the nephritic pain," (now universally admitted to be gout) "in the violent pain in the loins ; which as it *used* to *succeed* intermittents, proceeds from a translation of the febrile matter to the muscular parts of the body. But this disorder did not require a different treatment from the intermittent which it accompanied ; for it is increased, and life-endangered, by frequent bleeding, and any other evacuation." In the same volume\* he says, "it must nevertheless be owned that there is another species of the rheumatism which is near a-kin to scurvy ; for it resembles it in its capital symptoms, and requires nearly the same method of cure." Hoffman also observes there is a scorbutic rheumatism, to which the inhabitants of sea parts are most subject. It has been long admitted that scurvy has been properly classed as a misplaced or disguised intermittent fever, the method of cure and the means of prevention have been well founded on this theory ; its resemblance therefore to gout and rheumatism, if you will so have it, goes to prove the common origin

\* Page 400.

of the diseases, and to confirm the opinion that they are the same, and are both disguised states of fever.

Gout is a common finale in dysentery. It has, I know, been called rheumatism. Every physician having seen much of that disease must have observed this termination or metastasis of that disease. It is equally common in cases of protracted remittent fever ; such as have not been treated promptly, or have been badly managed : it is a thing of common occurrence in my experience, and the first and most severe fit of podagra I ever experienced in my life was in the convalescent state of remittent fever when I was not fifteen years' old, and which continued six or eight weeks.

The gout, moreover, alternates with intermittent fever. I have seen many cases of this in my own practice ; sometimes the patient, particularly if young, and in whom the gout has not been fairly established, will have two or three regular fits of an intermittent, the fever does not return at the expected period, but gout in some form or other takes its place ; in this form the complaint continues two or three days, suddenly the gout disappears and the intermittent returns. I have attended one gentleman in whom it al-

ternated with intermit fever at one time in the form of a podagra, and at another time in that of hemorrhoids, each form of the disease appearing at least twice during his confinement. In most of the cases where I have seen gout in youth, it alternated with intermittent fever.

I had a near relation who was subject to occasional paroxysms of gout ; if, as sometimes happened, he was attacked with ague and fever, it produced great alarm, because, as he expressed it, it was sure to bring on the gout. The same fact must, I think, have been noticed by all gouty persons. I have, myself, been subject to gout, in a moderate form, for twenty years, during the whole of which period I have scarcely had more than one attack of intermittent in succession, that form of fever generally giving precedence to gout.

Large populous cities are the hot beds of miasmata ; so they are of intermittent and remittent fevers, and the gout. "Thus," says Dr. Good,\* "among the Greeks it was a popular belief that Attica was the hot bed of gout ; in our own country it exercises an almost irresistible sway."

\* Vol. 2, page 339.

The inhabitants of the West Indies are more severely afflicted with intermittent and remittent fever than the southern States of North America ; so they are with the gout. Again, in the southern States this fever is more common than in the northern States ; so is the gout.

In the eastern section of North Carolina, which is an alluvial country, intersected with creeks, swamps, marshes, and mill-ponds, the natives are subject to annual attacks of intermittent and remittent fevers ; few of them, particularly while young, escape, and many have more than one attack during the season ; and there are few of them when advanced in life who do not have some form or other of the gout, except the field negroes, and not all of them are exempt from the disease ; so that, next to intermittent fever, this may be said to be the most common disease of the country. It is not here confined to the idle and luxurious liver, there are few such in the country, and still fewer who drink wine (except when prescribed by a physician) or live otherwise than plainly or simply ; yet the farmers have the gout, so do their wives and negroes ; and, according to my observation, the disease is quite as often to be met with in the negroes as in the white inhabitants of the State, particu-

larly among body or domestic servants, such as cooks, waiters, ostlers, and in mechanics, and such indeed of every occupation, except those who have their extremities made firm and healthy by constant hard labour.

In the western part of this State, which is of primitive formation, such is not the case : there they have little or no stagnant water ; the country is rocky and rolling ; they have no miasmata, no fever, and no gout. The late Judge Paxton informed me that he had never seen, in the county in which he resided, (one of the most western in the State) a fever of the warm season, except where it had been carried up from the eastern part of the State, and that he had never heard a case of gout or rheumatism there in his life.

Captain Richard Jones, who formerly resided in Edenton and its vicinity, was subject, during his residence here, to an annual or semi-annual attack of gout, which generally confined him with severe pain and other sufferings for several weeks. He holds the appointment of commander of a light boat, situated near Occacoke Bar, and not far distant from the ocean ; since his residence on board this boat, and in a situation in which he is exempt from the operation of miasmata, he

has remained perfectly free from his old complaint, as he himself informed me, nor has he had fever of any kind since he entered upon his new employment. The captain likewise informed me that a Mr. Keating, who formerly resided about Edenton, and was subject to gout, had been teaching a school on Occacoke during several years past, had been entirely free from gout during that period.

Here then is a fair issue, and one submitted to public decision, whether the gout owes its origin to certain exciting causes calculated to debilitate the system, such as wine, spirits, fermented liquor, tea, idleness, and gluttony, or whether it has its origin in miasmatic exhalations. In favour of the former opinion is the authority of nearly the whole medical world, with here and there a solitary fact and opinion doubting an opinion rendered almost sacred by the high authority and long period it has been promulgated. One of these cases is that of Mr. Hunter, from which a short extract has been already made, and, as Dr. Good says, is highly interesting and curious as related by Sir Everard Home, in his life of Mr. Hunter, "as shewing the singular forms which this morbid Proteus (the gout) sometimes affects, and the various seats it occupies ;

as also *that a life of temperance and activity* is no certain security against its attacks ; for Mr. Hunter had, at this time, drank no wine for four or five years, and allowed himself but little sleep at night."

From the foregoing facts it appears, first, that in countries where intermittent and remittent fever prevails, or where there probably exists the cause which produces that form of fever, there gout prevails.

Secondly. That in countries which are known to be healthy, and where the inhabitants are free from intermittents, they are also free from gout.

Third. That gout is frequently a finale of remittent fever.

Fourth. That it frequently alternates with intermittent.

Fifth. That gout most frequently occurs after the cause of intermittent fever has ceased to act directly on the blood-vessels so as to develope fever ; and

Sixth. That a life of temperance and activity is no certain security against an attack of gout.

## CHAPTER XXII.

## ON THE PREVENTION OF FEVER

Man is beset with evils at every turn or crook in his narrow dubious path through life. To lessen those evils has been the object of the philanthropist in every civilized age ; and to prevent them has been the chief design of every government. Aided as they both are by the formation of particular societies to prevent particular evils, those evils still exist, many of which are deemed unavoidable, and the objects of them require the constant vigilance of government, with a heavy expenditure of money, to prevent their pernicious spread in society : while fever alone, one of the greatest ills to which man is subject, has been left to roam at large, “seeking whom it might destroy,” unchecked by legislative provision, save by here and there a puny quarantine law ; unrestrained by pecuniary aid, except when its ravages threaten the destruction of an opulent city ; no Anti-Fever Society to prevent the fatal effects of the wide spreading and fell destroying malady. No. The whole plan of preventing, as well as curing, fever, has

ever been and still is left in the hands, singly and unassociated, of that class of men whose interest and importance in the world depend on its continuance and multiplication. Yet much is due to the integrity and disinterestedness of many eminent physicians for the manner in which they have discharged this obligation to society. Hippocrates left his home to lend his aid in preventing and curing the plague of Athens. Dr. Rush refused to leave the city of Philadelphia in the darkest era of her existence ; but offered his advice for preventing the spreading and for curing the yellow fever of 1793. The plans of Hippocrates and Rush were directed rather to the destruction than to an avoidance of the causes which produced the disease. Hence fires were ordered in every part of the devoted cities to burn, and water was poured over the streets to drown those causes. The disease continued unchecked in its spread, and unabated in its malignity. The citizens of Philadelphia, finding they could not conquer the cause, determined to avoid it ; they left the city and were saved from almost inevitable death.

It is true, the world has derived but partial benefit from any plan heretofore suggested to avoid or prevent fever ; the reason of which

must be apparent to any one who will take a view of the causes which are said to produce it. Thus they say there is a remote cause, a pre-disposing cause, an occasional or exciting cause, and a proximate cause. Among each of these causes there are many various and opposite causes ; so that to avoid all of them a man must almost cease to live. He must avoid cold ; he must avoid heat ; he must avoid the night air and dew ; he must avoid the day's sun and dryness ; he must eat little and often ; and he must eat but one strong meal a day ; he must drink no wine, coffee, or tea, yet he may advantageously drink all ; he must rise early and work before breakfast, and he must sleep late and never go out without eating ; he must wear flannel, and he must go barefooted : in short, to sum up all the advice which has been given, and the effect which it would have were it possible it could be followed, we may conclude by saying, he will have fever if he does, and he will have it if he does not. So that, upon the whole, the people generally have decided (and perhaps wisely) that the remedies are too numerous, too contradictory, and too difficult, if not impossible, to follow ; and that the disease itself does not inflict the same distress as would the

remedies ; thus they have reversed the adage that “prevention is better than cure,” and chosen the latter as the lesser evil.

If I have been so fortunate as to convince the reader that all causes, except the exciting one, are totally immaterial in the production of fever, and that many of the agents heretofore classed among the remote and predisposing causes of authors, are innocent, and have been improperly arraigned, there will be no difficulty in convincing him that fever may be prevented by avoiding the single and sole exciting cause. Thus the temperance societies, established principally to lessen the evil arising from intoxication, being convinced that the principal cause consists in the use of ardent spirits, have wisely abolished the drinking it. Their motto is, “touch not, smell not, taste not ;” ours should be the same, and the same plan will as effectually secure the persons practising it from fever, as the plan of any temperance society can secure its members from the evils of drunkenness. The cause which it is their object to avoid, is a subtle poison residing in rum, brandy, and whiskey, and is to be found in the high-ways and by-ways of every city, town, village and county in the United States, at all seasons of the year.

The cause which those should avoid to escape fever exists principally in low land situations, and only there at particular seasons of the year ; if then the first can be avoided without much difficulty, surely the latter may.

Some facts and much observation go to establish the truth that the particles which float in the atmosphere, and are of a nature so poisonous as to produce fever either of the winter or summer epidemic, possess more weight than the atmosphere a little elevated from the surface of the earth. Heat rarifies the air, it becomes lighter, and gradually rises from the surface, while miasmata, less volatile, remains as it were nearly attached to the earth. Dr. Cleghorn (on the diseases of minorca) says the peasants, who had their houses on the sides of the hills or mountains, were less subject to attacks of winter epidemic than those who resided in the valleys. We know at present too little of the nature of this aura or emanation from the bowels of the earth, to speculate on its qualities, or to say any thing about its specific gravity ; it will hardly be admitted, upon the testimony which I have submitted to the public, that such cause is entitled to all the consideration which I have given it : being, however, satisfied that no bet-

ter or more true cause has been assigned, I must pursue it during the remainder of this essay, and submit the propriety of the cause I have mentioned to the candid judgment of the learned. The fact from Cleghorn has been presented for the sole purpose of shewing that the cause of this epidemic is less apt to reach those in an elevated situation than those in a valley.

The winter epidemic in North Carolina, like the yellow fever in the northern cities, seems to have been generally, when in its most malignant form, confined to particular districts, which may be termed infected districts ; some peninsula or some neck of land, situated between small water courses, has been marked as its favourite abode, and while such districts at times become nearly depopulated with the enormity of the disease, the neighbouring districts and county remain perfectly healthy ; the disease from such infected districts has been carried into healthy ones by persons visiting the sick : hence it has been supposed, like yellow fever, to be contagious, but without foundation.

Hilly and mountainous situations have been generally admitted to be free from miasmata, particularly where they are clear of swampy ground or stagnant water : hence, says Dr. Lind,

in his advice to Europeans residing in inland countries, "the safest retreats, not only from the sultry heats and the inundations of a low country, but from the sickness attendant upon them, are to be found on the sides of hills and mountains where there are no morasses within three miles ; preferring such places as the vapour arising from the surrounding vallies, at least in its perpendicular ascent, cannot affect. Experience fully confirms this truth, that in such elevated and temperate situations, where the soil is dry, gravelly, and clear from woods, shrubs, or stagnating water, Europeans enjoy good health in the hottest climates, during all seasons of the year."

"This asylum for health (the same author adds) is to be met with in almost every quarter of the world ;" and he cites situations in Arabia and various parts of the East and West Indies, in support of his position.\*

The rich have long known and experienced the benefits of this doctrine ; it has been advantageously followed, too, by the eastern traders ; they, during winter, visit the most sickly places in the southern States, where they carry on a lucra-

\* See page 207 and the following.

tive trade, and return, well satisfied with their adventures, at the approach of summer and before the spread of miasmata, to homes exempt from such infection and the form of fever to which it gives origin.

To all, however, except the rich in the cities and southern low land countries, these annual retreats from sickness to salubrious situations are denied ; the poor and the laborious classes, come what may, are doomed to remain in that country where chance has fixed their lot. A removal, if not accompanied with ruin to themselves, would surely produce it sooner or later in their families ; yet, for these there is a preventive. It is one, to be sure, of which they would not willingly avail themselves ; and where a daily attention to business or to labour is indispensable to insure the necessary comforts to their families, it is not desirable that they should resort to it, particularly in the milder form of fever, and where there is little probability that an attack would be attended with danger. But to the young part of their families, particularly to infants who have not been long enough born to become acclimated, and who have not passed that eventful period in their lives after which they may reasonably plead an exemption from

that most fatal disease (particularly in the cities) known as cholera infantum ; the prevention is easy, it is safe, and moreover, it is certain.

It has been premised that the pestilential particles are confined by their specific gravity near the surface of the earth. They do not arise to the height of the second story of an ordinary dwelling house. This fact is sustained by the knowledge that it is the common practice for all distinguished strangers in the Barbary States to shut themselves up in their houses during the prevalence of the plague, and thereby avoid that most terrible disease.

Dr. Rush relates the case of a gentleman, from the West Indies, who had been subject to gout, who was apprehended for debt in Philadelphia, and confined to the debtor's apartment of the prison, and that he was cured of the disease. The Doctor ascribes his cure to the healthy, temperate diet of the prisoners. It was reasonable for a physician who believed, like Dr. Rush, that gout was produced from intemperance in eating and drinking, to have made such a deduction from these premises ; but believing, as I do, that gout is produced by miasmata, I should assign a very different reason for his cure. I have always understood

that a person confined for debt in any of the cities in the United States, or in Europe, if he possesses the means and inclination, may live in as good style as in the best hotel ; and there is no proof that this gentleman did not avail himself of all the privileges to which from his misfortunes he was entitled. The apartment for debtors is always in an upper story, generally well ventilated and clean. It would therefore seem that, in such a situation, whether in a prison or dwelling house, he would be above the reach of miasmata,—above the influence of the cause which produced the disease—and consequently that it could not recur.

It was said that, during the prevalence of the last severe yellow fever in New York, some families lived in the upper stories of their houses, whilst the disease continued, without receiving the infection ; and that while it was extremely dangerous for one to walk through the infected district, another might ride through it with impunity.

Most of the dwelling houses in the country have two stories, while many of those in the cities tower to the very clouds. They all possess an easy stairway or ascent from the ground story to the one above it. In some upper story,

then,—no matter how high,—I would advise parents to place their children, at least such as have not done teething, and confine them in the most airy and pleasant apartment or apartments during that season of the year in which cholera, other bowel complaints, and fever is most apt to attack them. Let them remain there absolutely and entirely during the continuance of hot weather, and until a severe frost has driven the cause of fever from their abodes. The children so confined will express some impatience for a few days, but that impatience is soon succeeded by a term of quietude and happiness. They are easily amused, and a little attention will readily reconcile them to their imprisonment. I recommend this confidently, and from my own experience, as an easy, safe, and certain preventive for all the diseases to which children are subject in the warm season, not only in southern low countries, but in the cities, where cholera alone destroys a large proportion of those who die under two years of age. To mothers I enjoin the execution of this advice; and oh! that I had the power to call it a decree, and compel their observance of it. Such who may have had the misfortune to lose a darling infant, such

who have felt that pang which no other evil can bring, such whose tears have trickled for nights, nay, weeks, over the wasting form of the dearest object of their hopes, and seen it dwindle under the most fostering care, will most willingly adopt this advice; those who know me best will give me implicit confidence; to strangers I beg a single trial, a trial for one season on one child or on more, and assure them they will never have cause to repine, or to accuse me of having enjoined a pennance which did not eventuate in good.

During the winter epidemic avoid the infected districts where they are known. If your abode should be in one of them, remove to a place uninfected, or confine those members of the family whose active services are not necessary for the subsistence of the whole, to an upper apartment.

Thus, then, it would appear that hilly and mountainous abodes are safe retreats for the prevention of fever. These exist in many situations in different parts of the world, and such as wish for full testimony on this subject are referred to the writings of Dr. Lind, who enumerates several such, and offers abundant testimony of their influence on the recovery of con-

valescents. The houses in the country generally, and in the city particularly, afford all the advantages, from their elevation, in an exemption from the cause of fever, as do hills or mountains, and are more easy of access. They yield a safe and certain retreat from the bowel complaints of children, which are fever, and that produced, too, by the common cause of intermittents, as has been evinced by the experience of the author. Such a retreat has cured the gout, (another form of fever,) as appears by a case quoted from Dr. Rush. The same kind of retreat has been long known as security against plague in those countries in which that disease is most apt to appear; and the infection of yellow fever has been acknowledged to respect it in the city of New York. It may be farther added that this is the principal cause why ladies who reside in an unhealthy country and who, from the nature of their occupations, are more confined to the house than gentlemen, are less subject to common autumnal fever. It is therefore confidently recommended; and on mothers, who have the chief care of the health of children, it is again and again most respectfully and most ardently advised and enjoined.

## CHAPTER XXIII.

WHY THE EXCITING CAUSE OF FEVER PRODUCES THE  
SEVERAL VARIETIES.

By a reference to the fourth chapter the reader will see that an attempt was promised to explain why the sole cause of fever should produce the several varieties ; he will also see why it may and frequently must happen that the sickening particles charged with the production of the summer fever, and which are derived from the joint or single decomposition of vegetable and animal matter, exist in different relative proportions to each other.

The inference which I propose to draw from these facts, and to apply for a satisfactory elucidation of the truth of the position that the summer fever is sometimes accompanied with an inflammatory, sometimes with a typhoid, and at others with a typhus action, is that when the inflammatory variety is prevalent a predominance of the floating particles happen to be derived from the decomposition of vegetable matter. That such is the fact, I infer

First. Because all poisonous vegetable sub-

stances, when taken into the system so as to endanger life or produce death, are violently inflammatory. Thus opium, nux vomica, belladonna, night shade, and the laura cerasus, produce violent fever, terminating sometimes in paralysis of the heart and arteries, or in effusions in the brain. Dr. Rush says "opium produces fever resembling yellow fever;" and there are few physicians who have not seen violent inflammatory fevers produced by some one or more of the above named poisons taken either by design or accident.

Second. The injection of vegetable poisons into the veins; and

Third. My own experience has confirmed the opinion, by my constantly observing that in seasons where the moisture is sufficient to produce a decomposition of vegetable matter, without being so abundant as to cover the vegetables, and thereby exclude the atmospheric air, that the summer fevers of such seasons are uniformly inflammatory.

Where the grade of fever is of typhoid character, I suppose there are equal or nearly equal portions of the vegetable and animal effluvia afloat in the atmosphere, and that while the stimulating and sedative qualities are neutraliz-

ed so as to impart neither an inflammatory nor typhus character to the fever, yet leave their poisonous qualities in full force : hence the typhoid state of fever, being a variety of fever sometimes approaching inflammatory and sometimes typhus, but generally differing entirely from either, or being a grade not exactly between those two, but so nearly so as to require a distinct method of cure from either.

When the animal exhalations predominate or exist alone, typhus is the result. This is the case in all dry seasons where there is too little moisture to decompose the vegetable matter. This has been the prevailing variety of fever in this vicinity for the last six years, during which period each summer has been uncommonly dry.

That typhus is produced by animal exhalations, is evident :

First. From the universally acknowledged fact that this variety is generated by putrid animal gas arising in crowded, dirty, and ill-ventilated apartments, as jails, hospitals, camps, ships, the crowded hovels of the poor, and in the cabins of the negroes of the southern States.

Second. From the known effect of the bite of the rabid animals and of poisonous reptiles, the stings of poisonous insects, and the injection of

putrid animal matter into the veins; all of which, agreeably to the experiments and observations of many respectable physicians, produce fever of typhus character.

Third. From the prevalence of the typhus state of intermittent in those parts of the southern States where fish is used for a manure; and

Fourth. I infer it from the fact that a regiment of French soldiers who were garrisoned at a convent in Valadolid, in Spain, during the peninsular war, being afflicted with malignant typhus from using the water of a well near the Inquisition, in which was found the remains, in a state of putrefaction; the water was sweetish, and the soldiers in this regiment were the only persons in the city who were sick at the time. On a discontinuance to use the water from the well the sickness ceased.\*

If I were asked how it happens that the subterranean deleterious gas (which has been assigned as the sole cause of influenza) operates so as to produce that fever of the three varieties in which it is said to appear, I answer that I do not know. Much gratitude will be due to the indulgence of the medical world, if it should be

admitted that this is the sole cause, while we are unable to account for its action ; and when admitted, all obligation is thrown on chemistry to detect the nature and variety of the gasses which are developed by subterranean decomposition, so as to enable some one hereafter to account for the mysterious action of this substance.

## CHAPTER XXIII.

## ON THE CURE OF FEVER

Dr. Clegborn has expressed an opinion that when fever is formed, it cannot be cure , but will run its course. Dr. Armstrong has said the same as regards typhus fever, of which he has so elaborately treated. Thus, with these physicians, the only use in medical prescriptions is to prevent the termination in death. Dr. Rush, while he agrees with them in this opinion, denies that fevers cure themselves, and yet records, in his manuscript lectures, many exceptions to their general rule ; as

First. Hemorrhages have cured fevers, even the yellow fever in Philadelphia and the West Indies.

Second. An attack of cholera morbus has produced the same effect ; and he cites Pringle, who says the only fevers ever cured are by this intestinal evacuation.

Third. Sweating has done it, but rarely after the third day.

Fourth. Fear and terror have extinguished a fever.

Fifth. A large dose of opium.

Sixth. Large doses of bark.

Seventh. A quart of wine or a pint of spirits.

Eighth. Dr. Currie has cured them on the second, third, and fourth days, by the effusion of cold water, but never after the fifth.

Ninth. Powerful friction.

Tenth. Violent labour.

The Doctor closes his remarks by observing these remedies are all dangerous, rendering convalescence slow, producing obstructions, and often endangering life.

Were I at all disposed to adopt this opinion, the numerous exceptions made by Dr. Rush would be of themselves sufficient to destroy the truth of it. But to these exceptions there may be added many others, not derived from accident, but to be witnessed in every day's practice, that the principle itself was founded in error. Futile and vain indeed would be the profession of medicine, if the opinion was generally prevalent that fever was incurable, that it must run its course and terminate in death or be cured by an effort of nature. Intermitents of a typhus character may most certainly be extinguished, with a timely and proper prescription, after the first paroxysm. The inflammatory winter epi-

demic is often cured in twelve hours by a single prescription. The typhus, or slow fever, which, under the old practice, would run a course of forty days, is now cured by a more vigorous and energetic treatment in twenty. The opinion, therefore, that fever always runs its course, although supported by the authority of physicians entitled to high confidence, has not accorded with my experience ; for I have seen many cases of fever yield in a few hours to a proper prescription, which, if left to themselves, would have run on for days or weeks, changed their character for mildness, and become dangerous, if not terminated in death. It becomes then the duty of all practitioners, who regard the honour of the profession, to discountenance this opinion : it is too prevalent already among the illiterate, and while they pretend to await the operations of nature, do not place so much reliance on her curative power as to trust her without the interposition of teas and other remedies of a domestic character, calculated, as they believe, to aid her efforts and to conduct them not only to a safe but speedy termination.

It must have been noticed that in the foregoing observations on fever, the author has made three varieties, each characterised by particular

symptoms, and each denoting a different state of excitement, and requiring consequently different remedies, to be adapted to the particular morbid state of the system. And that such as rely entirely on the name of the fever, according to the doctrine of the schools, and prescribe for the disease without farther inquiry, may probably be as apt to exhibit a hurtful as a remedial prescription ; for it has been a chief object with the writer, in this publication, to shew that a fever bearing precisely the same name, and corresponding generally in its leading symptoms, does frequently so widely differ in character as to require different and opposite remedies to cure it.

Agreably to the foregoing arrangement, it will be first in order to treat of the cure of the variety of inflammatory fever, as it appears in the form of winter epidemic.

This form of fever appears generally after the winter sets in, and affects many persons in the same district of country, sometimes pervading not only the United States, but reaching the West Indies, South America, and Europe. Hence the name of winter epidemic. It has been called, by the Spanish writers, influenza, from the belief that it owed its origin to parti-

cles floating in the air. To its appearance only in winter, there are some exceptions ; I have, myself, known it to exist in North Carolina, and in other parts of the United States, twice in October.

The disease is ushered in with the common symptoms of fever, as chill or ague, succeeded with pyrexia, often with catarrhal symptoms, and frequently with local pain in some part of the body. The pain is not always seated in the same place, but shews itself in all the varieties of Dr. Good's "inflammatory fevers with topical affection," from phrenitis to cystitis. Whether the form of cholera, which is sometimes manifested in its attacks, are really gastritis, I have not been able to learn, nor is it important in the cure. Of one thing, however, I am certain, that no form of the disease should be classed among Dr. Cullen's phlegmasia, because the fever is not secondary,—produced, as the Doctor alledges, from painful irritation,—but, on the contrary, most generally precedes the pain, and never follows it. The term influenza is very expressive, but I have retained the other in accordance with the most approved writers of our own country. The pulse and other appearances of the patient are such, and all of such, as have

been already stated to exist in the several degrees of inflammatory fever.

The most important consideration, and one on which the safety of the patient, as well as the reputation of the physician, depends, is to arrive at a satisfactory and just conclusion, not only that the fever properly belongs to the species of inflammatory or fever of excessive morbid excitement, but the degree in which that excitement is above the healthy standard. This inquiry will be greatly aided by a consideration of the marks already given as to the state of the pulse, its force, frequency, and tension. By an attentive examination of the plumpness of the features, vivacity of the eyes, and of the nature of the prevailing epidemic ; for it has been observed by the author that however different in degree of violence the winter epidemic may exist in different subjects, it has much more generally than the fever of summer been confined to a single variety in the same season.

The most difficult and perhaps the most important decision to be made, in arriving at the true nature of this form of fever, is where it may be found in that violent inflammatory form in which the blood-vessels and whole system are oppressed by the enormity of disease. Here the

physician, unless a real judge of the pulse, may not perceive any tension in the artery, and from the frequency of the pulsation might unhesitatingly determine that the disease belongs to the typhus species. From want of precision in such cases, much uncertainty attended the practice in those violent epidemics which spread over the whole United States, from the year 1813 to 1819. The practice varied and differed almost every where, and confidence was very generally wanted even among physicians as to the proper method which they should themselves pursue. Thus, while some were treating this oppressed state of the system as inflammatory fever, others considered the complaint as a low grade of typhus, and treated it as such. When in another season it really appeared in typhus character, some who had treated it as typhus during the preceding winter, (when it happened to be highly inflammatory) and consequently unsuccessfully, were disposed to believe they had been mistaken, treated this new fever as one of suffocated excitement, with the same unexpected result.

The practitioner, then, who is not really an adept at pulse-feeling, must be surrounded with difficulty and apprehension ; such I would ad-

vise to look for the "Red Gauntlet mark," the horse-shoe on the forehead ; the angry frown, and the rejection or great distress produced by a stimulating prescription, and the other symptoms already enumerated, by which this state of violently oppressed morbid excitement is to be distinguished from that low grade of excitement existing in the disease, when found in the form of typhus.

When we are satisfied that the fever is of the inflammatory species, whether the over excitement is moderate or so violent as to prostrate the system, it affords me great pleasure to offer to the public a most efficient and speedy remedy, and if there is a specific for the cure of any disease, this may be said to be one ; for, under my direction, it has frequently produced a cessation of the most violent symptoms, and left the patient in a rapid state of convalescence within twelve hours.

The remedy to which I allude is calomel in a large dose. It has long been my practice to give to all patients with this disease, from fourteen years' old and upwards, twenty grains of calomel, with four grains of rhubarb, made into one powder or four pills, at a single dose, in the evening, or as soon as I visit the patient. The

addition of the rhubarb secures the certain though mild operation of the calomel. The medicine should be followed by the plentiful use of some warm diluting tea, here I prefer the yopon, which resembles very much in taste and appearance the black teas so generally used in the cities. The calomel and rhubarb seldom produce more than three alvine discharges ; these, however, appear to be made up principally of dark coloured bile, are not thin or watery as are those produced by salts or jalap ; and, with the warm drink, promote generally the secretions from every secretory organ in the system. If the fever is accompanied with local pain, or with cough, as it frequently is, these symptoms yield with the fever. If it is accompanied with cholera, with diarrhœa, or with dysentery, as is frequently the case, these symptoms as certainly yield to the remedy as does the pain or cough. In short, be the local symptoms what they may, or whatever bearing they might have in the cure of other diseases, here they require no local remedy, but all give way, in the less violent forms of the disease, to this solitary and simple prescription.

This form of fever, according to all my experience, is the most bilious of any with which

I have ever met, in a long and extensive practice. The liver, without being more generally than any other part of the system the seat of local disease, seems, from some cause or other, to feel the most violent efforts of the fever. The billious discharges, when the fever does not particularly locate itself on the stomach or bowels, are generally enormous, and are always accompanied by an abatement of suffering. So that if there is a fever entitled to the name of billious, this much more emphatically deserves that title than does the remittent or *billious fever*, as it is called, of autumn.

This prescription of calomel and rhubarb, on which I have so generally relied to cure the form of fever here under consideration, (and which exists not only in all the forms of Dr. Cullen's and Dr. Good's "itises," but also in those of cholera, diarrhœa, and dysentery) may sometimes, but not often, require to be repeated, even in the milder form of the disease ; yet, in the most violent or oppressed form, it requires not only to be repeated, but to be aided by other remedies which are calculated to reduce the morbid and excessive excitement. Among which is to be enumerated, as first, blood-letting. The calomel should, however, in every case,

precede the lancet, because it may, in the first place, render the lancet unnecessary, and in the second place, when the blood-vessels are greatly oppressed, the system does not readily react after the sudden loss of much blood, and the patient remains greatly prostrated for many hours ; while a previous exhibition of calomel with the rhubarb and warm drinks would produce a less sudden prostration, and relieve the oppressed state of the circulation, when bleeding might be used without danger of that prostration which most generally occurs while the blood-vessels are suffocated.

The calomel and rhubarb may be repeated once in two days, and after the first dose, if the fever continues with much violence, this medicine may be followed with Epsom salts and calcined magnesia, mixed in lemonade, to be taken in small doses at long intervals, so as to act as a febrifuge as well as to promote the more powerful operation of the calomel. I have been led to believe that the operation of calomel alone, is not to act as a cathartic primarily on the bowels, but that its operation in this way is indirect ; its first operation seems to be on the emunctories of the liver, producing a discharge of bile into the intestines, which, by its irritation,

increases their peristaltic motion, and occasions the consequent discharges. The bile is aided by the addition of a small quantity of rhubarb to the calomel, which of itself would produce no cathartic operation, and which may, by the continuance of the salts and magnesia as above recommended, be carried to any desirable point.

The repetition of these prescriptions must be regulated by the sound discretion of the physician. No precise rule can be given as to the number of doses or the frequency of bleeding which will be necessary to remove the disease, and which the patient will bear without being weakened so much that the fever, although violently inflammatory in the beginning, may run into the variety called typhus, which it is apt to do if convalescence does not follow the use of these prescriptions within five or six days. It would be advisable, therefore, where there is not the best possible effect derived from this course in five or six days, to pause, to be well assured that the excitement is still above the healthy standard, and in case it should be, to persist in a farther use of the antiphlogistic plan. If bleeding may be certainly had recourse to again without danger of sinking the patient into typhus, there will be no impropriety in the farther

use of the lancet. If the farther use of calomel and rhubarb can be ventured on without great hazard of producing salivation, it will be the best remedy. The bowels of the patient, as well as his muscles, soon become fatigued by the constant operation of cathartic medicines. It will be a good rule, therefore, where the symptoms have been mitigated or are not dangerous, to allow him some repose from this course. It will be safe, under such circumstances, to suspend for two or three days the use of the above medicines, and to place him under such as will allow him to remain in bed and to enjoy that quietude which may be consistent with his feelings. Such medicines are to be selected from those which were formerly *considered sedatives*. I am aware that the disciples of Dr. Brown have denied the existence of such remedies, every article with them being a stimulant. Fortunately for mankind, common sense has pronounced the opinion erroneous, and it seems again to be admitted that tartar emetic, crude nitre, and many other articles of the *materia medica*, possess the power of reducing excitement without producing any sensible evacuation from the system. These medicines may be used either singly or combined. I have gene-

rally given them together, in the proportion of one eighth of a grain of tartrate of antimony to seven and a half grains of nitre, dissolved in some mild fluid, and repeated once in two hours, with the free use of demulcent or light drinks. I have seldom experienced any increase of cough from the use of nitre when that symptom existed, and I have generally found that a larger dose of the tartar produced so much nausea as to make a discontinuance of the medicine very desirable to the patient.

The large doses of tartrate of antimony so highly recommended in pleurisy, (one of the most common forms of influenza,) I have never seen a patient who could retain. They soon produced the most deadly sickness and vomiting, and were consequently discontinued.

For the local symptoms of this disease some remedy will be always expected. In the milder forms of the fever nothing more than warm fomentations, frequently applied, are necessary. Where however the pain, as it sometimes is in the severe forms of the fever, extremely distressing, leeches, or cups applied to the part affected are highly beneficial, and may be not only used once, but repeated with great safety and propriety.

Blisters are totally inadmissible in this or any form of fever except the typhoid. They never more contributed to the cure of inflammatory or typhus fever, than has pediluvium ; but have been frequently more mischievous. In the first the stimulating effect is far more than sufficient to counteract any benefit which can result from any quantity of serum which they extract from the surface ; while, in the latter, the quantity of fluid drawn from the system is more injurious than any invigorating influence to be derived from their stimulating operation is beneficial. To say nothing of the painful and long continued sores and issues which they sometimes leave in typhus patients who recover ; or the odium which attaches to the physician where the blister happens to be followed by mortification before death, and the death of the patient being charged by his friends rather to the blister than the disease which it had failed to cure.

In conducting this form of fever to a salutary termination, the physician should constantly have in view the probability of its running into typhus. This change is apt to take place during some seasons, even in the milder forms of the disease ; in the most violent forms it is at every season to be apprehended, and carefully guarded

against. In the milder form such a termination is not often dangerous, the new variety being equally mild with that in which the disease commenced. But in the severer form the change is often rapid, and the new form frequently so malignant that, without the most constant watching, the disease may terminate in death before the attending physician is warned of the danger, or even apprised of the change. All changes then leading to this result should be carefully met by a prompt and decisive change of practice. The means here should be opposite to such as were first indicated ; they should like them be adapted to the state of morbid excitement, and will be in order when we may arrive at the method to cure the typhus form of fever.

The passive remedies which will be proper in the cure of the inflammatory variety of fever, may be generally and safely left to the instinctive feelings of the patient. These will surely direct him to rest, to quietude, to silence, to an absence of much light, and of much noise or conversation. They will induce him to avoid stimulating food and drink and to shun heat. They will direct him to cool air, cool light drinks, and to subacid fruits. In all these propensities he may be advantageously indulged at all times, except

when it may be proper for him to use warm drinks, as has been recommended to promote the operation of his calomel, and then if he prefers warm lemonade to tea or yapan, the indulgence in the preference is not calculated to result in injury.

Where the fever has been accompanied with severe local pain ; even after the removal of such pain, if the fever is protracted or runs into typhus, abscesses are apt to form in that part of the system in which the pain is first felt. Those abscesses happen sometimes in the thorax, produce a pointing, and if they are not opened, the matter generally bursts through and is discharged ; at other times it bursts into the bronchial vessels and is discharged by coughing. When the pain has been seated in the bowels, the abscess sometimes opens into the intestines, and finds an outlet ; at others it points through the abdominal parietes, and requires to be opened with the lancet. In all these various cases nature shews a wonderful proficiency in self preservation, and the most that the practitioner can do will be to sustain the system by light farinaceous or milk diet from the wasting effects of the discharge.

The prognostications in this form of fever, like the prognostics in every other disease, resemble

the changes in the weather ; they are not to be foretold with any degree of certainty. In case of disease, when regarded as dangerous, the physician is as readily deceived as may be the meteorologist in changes of the weather. In both at times all signs fail ; and it would seem that in many cases a common observer is as apt to guess correctly as the most learned in the profession to which they belong. It is a good rule never to abandon a patient. He is not, nor is man in any situation, easily to be deprived of hope ; if therefore his physician surrenders him to a disease which he considers incurable, he will resort to other means, either to another practitioner less qualified perhaps to do him justice, or, in the absence of such physician, to a quack, to an old woman, or to his nurse.

## CHAPTER XXV.

ON THE CURE OF THE INFLAMMATORY VARIETY OF THE  
FEVER OF SUMMER.

There are such various grades in the inflammatory fever of the warm season, there are so many and such various organs either directly deranged or sympathetically affected in it ; the disease itself has so many forms derived from its intermitting or remitting character, all of which require different modes of treatment, that it will be necessary to enter somewhat minutely into such forms and symptoms of the disease as require separate and somewhat modified treatment, and to mention such treatment as will be best adapted to the particular symptoms which may arise.

Of the cure of yellow fever in its inflammatory form it does not become me, who have seen so little of the disease, to speak. It has been fully discussed by abler pens, and by men standing high in their profession ; and if they have not succeeded in reducing this violent form of disease to that subjection which the art of healing claims to hold over every variety or form of fever, it has not been owing to their want of talents, their

want of industry, or the want of that daring intrepidity which has led them to hazard, and even to lose, their own lives in endeavouring to save those of their fellow beings.

We have no populous towns or cities in this part of North Carolina, we have no crowded streets, or filthy narrow lanes, we have but little foreign trade, we have in fact nothing to generate that highly concentrated miasmata of a nature so deadly poisonous as to produce this fatal disease. Yet have some of our towns, for a short period in the summer sometime past, been visited by this scourge of our species; but in no instance, I believe, where it was not imported in the holds of vessels from the West Indies, and where it had been generated by the confinement of some vegetable substances subject to putrefaction in that climate, and let loose among such as happened about the wharves when that matter was thrown from the vessels to spread its ravages among those who came within reach of its infection.

The most violent form of summer epidemic to which we are subject, of inflammatory character, is that which appears with evident symptoms of oppression.

The pulse is frequent and corded; the intellect

is obscured ; the patient complains of head-ache, is extremely restless, has the frown in his forehead, or "the mark of the Red Gauntlet family ;" his stomach is extremely irritable, rejects most stimulants, will not be composed by opium in any of its forms ; but all the sufferings of the patient are aggravated by every attempt to compose him in the paroxysm by what are termed anodynes. It will not be prudent to bleed him, on account of the bad effects which bleeding is known to have in that form of fever in which the blood-vessels are too much oppressed readily to react. I have heard of a patient who died under the operation of a dose of tartar emetic taken in a paroxysm of this fever ; and I have seen one who had been given a dose of calomel, who vomited for twelve hours, and owed his life to a strong constitution.

If, then, in the paroxysm of this form of fever we are not to bleed, not to give calomel, tartar emetic, or opium ; what, it may be asked, is to be done for a patient whose sufferings are great, and whose restlessness will not abide delay ? I answer his stomach will bear cold water, it will bear lemonade, and it will bear Henry's calcined magnesia ; and his body will bear frequent ablutions of cold water. These then are the only

remedies which I have ever been able to apply in such cases. The magnesia may be given frequently, in small doses, without danger of rejection; this, with moderate draughts of lemonade frequently repeated, not only quiets the irritable state of the stomach and lessens the vomiting, but they may be made to operate freely on the bowels; while the frequent washing or sprinkling of cold water over the surface abstracts the inordinate heat and hastens the remission of fever. This form of fever is most apt to be what is called a double tertian; it may, however, and does sometimes appear as a single tertian, or even quotidian. In its remission, however, be it in what form it may, the system, comparatively speaking, is composed, the headache has abated, the horse-shoe has disappeared from the forehead, the pulse has become open, but remains full and strong, though less frequent, the stomach is composed, and does not reject light nourishment, such as tea or ripe fruits. The marks of inflammatory excitement still however remain, the skin is yet hot, and the features are full. This is the season to use more active reducing remedies. Here bleeding may be resorted to with great benefit. Ten grains of calomel, with two grains of rhubarb,

either in a single powder or made into two pills, may be administered either before or after the bleeding, as may be most convenient; this medicine should, however, be followed in four hours with two drachms of Epsom salts and half a drachm of magnesia mixed in a wine-glass of lemonade, and repeated every hour until large and free discharges are produced from the bowels. Calomel operates more directly on the liver, and empties from the biliary pores the bile which is generally redundant in this form of fever, more efficiently than any medicine with which we are acquainted. The salts and magnesia effectually remove the bile from the intestines, and with it the calomel, which, if suffered to remain, might produce salivation—a catastrophe which, according to my notions, is very much to be deprecated. In the latter opinion if not singular, sure I am that I stand with a lean minority of my brethren. Since the introduction of the mercurial practice by Dr. Rush, in the cure of the yellow fever in 1793, his practice, with some modification, has been adopted very generally, not only in the cure of the higher grades of remittent fever, but in all the variety of grades, whether remittent or intermittent, in every part of the United States. This has been

done against not only the common sense, but against the prejudices, of the people, who have always been, and still are, opposed to such practice. The artificial fever accompanying the salivation, to say nothing of the loss of teeth and beauty by which it is more or less frequently followed, is much more painful and of longer duration than would be an ordinary intermittent or remittent fever, if left to be cured only by the instinct of the patient. Such practice is not only publicly taught, as I understand, in some of the medical schools, but it is advocated in strong terms by respectable physicians in the medical periodicals of the country. In two essays on autumnal epidemical fevers, published in the Medical Recorder, by Doctors Cooke and Merritt, the mercurial practice is strongly recommended and enforced. The essay by Dr. Cooke is elaborate, well written, and abounds with many facts shewing not only the origin of autumnal fever to be derived from marshy exhalations, but proving that these exhalations are the sole cause of fever, and that they act without the aid of remote or predisposing cause.

While Dr. Cooke relies greatly on the use of calomel, which he regards as a most excellent medicine, he admits it has one bad effect, viz. :

that of producing ptyalism. This is the desirable point to most practitioners who rely on calomel as the chief or only medicine in the cure of fever ; when this object is attained, in their estimation, the patient is safe ; but, says the Doctor, (with which assertion I most heartily concur,) “experience has convinced me *long since* that the opinion is erroneous.” He places “*the safety of the patient not upon producing ptyalism, but on evacuating day by day dark matter from the bowels*, under the use of proper means, until the discharges become natural.” These proper means, according to the Doctor’s formulæ, are res scammon. aloes, rhei. and calomel, āā ʒss. m. f. pills twenty-four, or rad jalap. aloes, and calomel, āā ʒij M. F. twenty-four pills. “They are equally efficacious ; in general four or five of these pills operate freely. Cases, however, occur in which the difficulty of moving the bowels is excessive ;” here he recommends “the giving of five or six doses of these pills in a single day.” Where the mouth becomes affected in a week or more by the daily use of these pills, the Doctor recommends a preparation in which the quantity of calomel does not bear so large a proportion to the other articles.

“This treatment,” he contends, “is necessary in every grade and every form of our autumnal epidemics.” It is recommended also “in dysentery and even in cholera infantum.” Under the use of this prescription alone he relies, therefore, to cure all grades and every form of autumnal disease, and even the winter epidemic. It is true he prescribes bleeding, and records cases where it has been used to an alarming extent with the best effects ; but on this compound of calomel with cathartic medicine, and its operating so as to produce dark discharges from the bowels of the patient, the whole safety of the case, whether summer or winter epidemic, is made to depend.

This practice is highly recommended on account of its simplicity. The physician would be at no pains to ascertain the grade of fever, he would be at no trouble even to visit his patient farther than might be necessary to ascertain that he really had fever. His directions would be so easily understood that the patient would scarcely require a nurse, and could he obtain the pills, of which a recipe is given, he might even dispense with the physician himself.

The practice comes highly recommended, too, from the learned of the profession in Philadel-

phia, where, I presume, it has been long popular, for it appears the essay was there thought to merit a premium over many competitors, and one hundred dollars was accordingly awarded by some of the professors and most learned members of the faculty.

From such authority I fear it will be thought timidity in me to differ ; yet, I owe it to candour, to truth, and to that respect which I shall ever entertain for those for whom I have been long in the habit of prescribing, to say that I cannot confide in the practice to the extent it has been eulogized, or believe that it is preferable or more safe than such as I have myself subjected such patients to as have come directly or indirectly under my care.

I have tried Dr. Cook's practice in a few cases of a milder form of inflammatory remittent fever than the one now under consideration ; I never have nor could I be induced to try it in that low grade or variety of fever distinguished as typhus. In the cases where I used it, although I presume I could not have chosen cases in which it would have been more successful, I found no cause whatever to prefer it. The calomel, aloes, and scammony, it is true, produced dark coloured and not watery discharges, but I thought then

and still think this dark colour of the fœces was produced from some chemical action or mixture of the calomel and bile ; what that combination was it is not my province, if I had the ability, to say, but that such is the general effect of calomel, in sickness and in health, is a fact of common notoriety. The medicine did not always salivate, but I noticed that it produced a new form of fever even without ptyalism, and when this mercurial form of fever subsided, the old one which it had displaced was very apt to, and did most frequently, return. Another very unpleasant symptom was an affection which I thought the medicine produced on the pancreas, where it failed to affect the salivary glands. This was pain near the lower orifice of the stomach, greatly increased on swallowing liquids, and attended then with symptoms of suffocation.

But, to conclude this long digression, my objections to the use of calomel, as recommended by Dr. Cook, (and whose method is as little objectionable as that of any other practitioner) are insuperable ; they are not to be overcome by the opposition and reasoning of the most learned of the profession ; they may be called prejudices,

and thought to be vulgar errors, but I hold them, I have long held them, and I can never part with them. I regard calomel, when so used, in the light I would a mineral gas, it may become so by its decomposition in the stomach, and when it reaches the arterial system, like the gaseous particles which produce influenza, it may instantly change a mild form of remittent fever into the worst form of the winter epidemic ; and this I have no doubt it would more frequently do were not its poisonous particles suffered to escape through the salivary and other secretory glands of the system.

I have not ventured to oppose this indiscriminate use of calomel in the cure of every grade and form of fever, without having given to the subject the best consideration in my power, and that too under the influence of great diffidence in my own judgment, as well as the deference which I was always disposed to feel for the superior standing and judgment of those eminent men who sanctioned and followed such practice. But the result of my best reflection is that the practice is unprofessional, that it proposes to dispense with high medical attainments, and that it is inexpedient, because it is less safe, less

quick, and less pleasant, than the mode I have heretofore followed, and which it is my purpose here to recommend.

The proper method to cure this inflammatory form of fever is universally admitted to consist in the use of such means as most readily reduce the excessive excitement. Calomel has no such effect when suffered to remain in the system, and its direct operation on the bowels is at least slow if not doubtful. If, therefore, the quantity of bile which it discharges from the liver (and which has a strong tendency to nauseate the stomach and increase the peristaltic motion of the intestines) fails or is insufficient to prove cathartic, the calomel enters the circulation and produces an effect the very reverse of a healthful reduction. To obviate this deleterious effect of the calomel, while we avail ourselves of the known specific operation which it has on the liver, and to aid in the general reduction of the system, are the chief inducements that the medicine should be followed with Epsom salts and calcined magnesia.

Calomel possesses no tonic powers : while other medicines invigorate the whole system and impart an increased but more healthy action to the blood-vessels, calomel does not strengthen

the system, and the effect on the blood-vessels is to produce morbid and excessive excitement, which is fever itself.

It is scarcely necessary to inform the reader that every variety of summer or autumnal fever is made up of paroxysms and remissions or intermissions ; that these changes in the condition of different patients, and even sometimes in the same patient, occur at longer or shorter intervals, that after more or fewer of these changes, the disease ends either in death or convalescence.

It is important to know when these changes happen, because such change generally in the inflammatory variety requires a change of remedies. The bleeding, the calomel and rhubarb, and the salts and magnesia, may be supposed to have occupied all the time in which the patient's system would have borne such treatment. When the return of chill or ague announces a new paroxysm of fever and a change in the condition of the patient, all the symptoms noticed in the first paroxysm may be again expected ; they sometimes return in a less violent degree, but they are often more violent than in the first paroxysm. If the chill is violent or of long continuance, the patient should be given warm light drinks, for which he often expresses

a preference ; he should be accommodated with plenty of warm but light covering, from which the heavy bed quilts of our State, with those of Marseilles, should be excluded ; warm applications to the extremities by such means has long been resorted to in all well regulated families, may be readily procured in a variety of forms.

On the subsidence of the cold and commencement of the hot stage, the patient will require the removal of the bed clothes, he will wish to exchange his hot for cold drinks, and cold applications to his extremities for those warm applications which were used in the chill. Here the same treatment as has been already recommended in the paroxysm is again to be pursued until a remission follows the fever. In the country it is not always in the power of the patient to procure lemonade ; I have, in such cases, used cider as a substitute, and it answers very well. In the remission, if the pulse will bear it, bleeding may be again used to such extent as the state of excitement will justify, and which, in this as in every other case where the lancet is used, must depend much on the judgment and discretion of the physician. Instead of the calomel, as prescribed in the first paroxysm, I would recommend that salts and emetic

tartar should be given in small doses and at such intervals as will keep up a constant nausea, without, however, producing vomiting, but operating occasionally on the bowels, and which is not to be discontinued while the patient does not complain much of sick stomach and fatigue. Salts and tartar, given in this way, is a most powerful sedative ; it relieves the engorgement of the lungs and liver, both of which are sometimes thus attacked in this form of fever ; it cools the surface by producing gentle perspiration, and abates the inordinate action of the heart and arteries by its powerful reducing qualities. Cold drinks, and aspersions of cold water, are not to be omitted, and ice, if convenient, may be applied to the head, if the pain and heat are considerable. With the course of treatment here recommended the fever sometimes abates without changing its type, but most generally after three or four paroxysms (during the whole of which these prescriptions should be continued and adapted to the condition of the patient) it becomes typhus, when the depleting and refrigerating plan should be discontinued, and such prescriptions resorted to in the remission as will be hereafter recommended in the cure of the typhus variety of fever. The calcined magnesia

and lemonade, with the other remedies recommended in the hot stage, may be now omitted, and an anodyne administered in their stead, which will produce all the good effects to be expected from such medicine in that state of the system where its use is indicated, and a speedy recovery may be reasonably predicted from its repetition in the beginning of each return of fever, and a proper use of tonics and nourishment in the remission.

In the milder forms of inflammatory summer or autumnal fever, whether of the remittent or intermittent class in which they have been placed by most medical writers, a less energetic plan than the one above recommended may be used with entire safety and with more ease to the patient. In such cases the pulse is strong, full, and frequent, but is not chorded or oppressed: the stomach, though not entirely composed, is not so irritable as to reject such remedies as may be deemed necessary to reduce vascular excitement; and the system is not so oppressed as to make bleeding inadmissible from a fear that the blood-vessels will not react. The remedies, therefore, which, from the existence of these causes, we were obliged to postpone in the more violent form of the fever, until the

paroxysm had subsided, may be safely and properly applied in the one now under consideration, and should not be delayed until the remission. The object of the first importance, and one which should be steadily kept in view by the practitioner, is so to reduce the inordinate excitement in the paroxysm, as when a remission occurs he may find the vascular action so moderated that the quinine and its usual auxiliaries may be given with a fair prospect of their not being rejected, but of insuring a speedy recovery to his patient. This object is not, however, always attained after the first paroxysm, and the practitioner has frequently to continue the depleting and refrigerating plan through all the changes of the disease during several paroxysms and remissions of the fever.

I would, however, recommend that neither the bleeding or calomel should be often repeated. The bleeding, if used indiscriminately, may reduce the excitement so much that a longer course of tonics will be required, when they become proper, than would be otherwise necessary, and the convalescence will be more slow and protracted. And in the too frequent repetition of the calomel, even when, as it always should be, it is followed with salts and

magnesia, or one of them, it may produce an artificial fever or ptyalism, either of which would cause more real misery to the patient than would the first fever if left alone to the operations of nature. When the salts and tartar, in small dozes, produce an insupportable nausea or fatigue, it may be given in full dozes, and, after the first operation on the bowels, may be discontinued for six or eight hours and the patient left to the further effect of the medicine, under the free use of cold light drinks. This course may be daily alternated with various febrifuge or sedative medicines, as tartrite of antimony and crude nitre ; or, when the tartar is objectionable and not indispensable, cream of tartar and nitre in equal doses. I have often used, with great benefit, a drachm of each of the latter articles, mixed together and dissolved in a pint of sweetened sage tea, and a wine-glassfull given once in two hours. In the remission, while the stomach is too irritable to take the quinine, or the pulse too strong to bear it, I have found this a most excellent remedy.

Having reached that desirable point in which the patient will bear the quinine during the remission, it should not be delayed, and the shortest period in the altered condition of the

patient should not be passed without his being placed in possession of this divine remedy. Those who have ever used the bark in substance must be apprized that the system will bear the quinine at a higher point of excitement than it will the bark, and that it is equally efficient in any case; that the stomach will bear it whenever it would bear the snakeroot, because it is not more nauseous and is exhibited in a much more condensed form; that it is vastly more efficient than the snakeroot ever can be made in infusion, and that therefore the snakeroot,—unless it could be operated on as the bark is in the preparation of quinine,—must soon forfeit its great claims as a valuable article of the materia medica.

After the quinine has been once given in the remission, the further use of depleting means becomes improper in the paroxysm of the fever; here an anodyne may be given in the forming state of each fever, and if this fails to keep the patient quiet during the continuance of the paroxysm, he may occasionally take doses of sweet spirits of nitre, antimonial wine, and purgative, which, in a very moderate degree of over excitement, produce perspiration and quietude; where costiveness continues with consi-

derable increase of heat the calcined magnesia and lemonade after the anodyne will be more proper.

The inflammatory form of intermittent is most commonly to be seen in solitary cases during the winter season, where the disease has been neglected or improperly treated in autumn. I have never seen it as an epidemic. The pulse is open, frequent, strong, and full, and the artery appears large and bears pressure. The features are full, and the face is flushed during the paroxysm. In the intermission the patient will bear neither tonics or stimulants; they produce heat and, even in very small quantities, increase his excitement.

In curing this inflammatory form of fever of the warm season (for to this class belong the intermittents) the same treatment may be pursued as above recommended for the milder form of inflammatory remittents. The patient will bear bleeding freely, and the other auxiliaries, particularly salts and tartar, may be used with a certain prospect of either producing a speedy cure, or of causing such an altered state of the excitement that quinine may be given with the best prospect of success. I have never found blistering (as recommended by Dr. Rush)

to do good. It is never needed, and produces much unnecessary pain and irritation. This variety of fever is apt, if of long continuance, to produce a dropsical state of fever ; it however requires no different treatment on account of the effusion of water, whether in the cavities of the body or celular membrane. I have used, and would again recommend the use of, the powders of zartrite of antimony and nitre, or the cream of tartar and nitre, with the free use of cream of tartar beverage or cold lemonade. These medicines lower the state of excitement generally, and particularly that of the minute termination of the arteries which pour out the watery particles of the blood, and by relaxing the absorbent vessels, which are in this state of dropsical fever too high-toned to answer the purpose for which they were intended in the animal economy, enable them to take up the redundant water, and convey it through the circulation into those secretory organs best adapted to expedite its passage from the system.

There are other forms of the summer epidemic which, when appearing, as they frequently do, in the inflammatory variety of fever, deserve, from their peculiar symptoms, a passing notice. And it may be here remarked that although

the treatment above recommended may be relied on to cure them ; yet, as there are other and more appropriate remedies, I conceive it my duty, in a treatise like this, to enumerate them. The first to be noticed is *the diarrhæa state of fever*. This is the first of our summer diseases ; it brings our stoutest negroes from the field, generally in June and July ; they complain of weight in the bowels, from which they have frequent large discharges of thin billious matter ; the discharge is generally preceded with pain, to which it affords but little and temporary relief. The pulse is full, not frequent, but sometimes chorded ; the countenance appears anxious, and the patient is thirsty, has a white fur on his tongue, and is rather unquiet. This disease occurs also in children, and is sometimes in them the precursor of cholera. I have seen much of this disease among the negroes of Josiah Collins, Esq., the elder, formerly of this town, who employed several hundred hands in his rope work, in his tannery, and on his farms in the vicinity. He was a man of the most industrious habit, and possessed a strong mind with superior judgment. He gave to all his various concerns the most minute and constant attention, among which, though compara-

tively small to other and very important concerns, was the health of his negroes. I generally visited his establishment every morning during the sickly season, where I seldom failed to find some on the sick list. If it so happened that I was not there in time, Mr. Collins, who was an excellent judge of the pulse, generally examined the male cases, prescribed and put up himself the medicine which he thought most proper. In the diarrhœa form of fever, his constant practice was to give to a negro man two grains of tartar emetic dissolved in a little warm water and mixed with a wine-glassfull of castor oil ; he saw the patient occasionally during the day, and this was his invariable practice with all his sick negroes, whether under his own prescription or mine ; if he found in the evening that the operation of the medicine had been violent, and that the negro had been weakened by it, his constant practice was to order some light nourishment, and to give him what he termed a paretic, which consisted of a tea-spoonfull of that medicine with fifteen or twenty drops of laudanum ; and with this prescription the negro was generally cured the first day, and returned to his work on the second.

I had been in the habit of prescribing for

these cases salts alone, sometimes salts and tartar in divided doses, and sometimes calomel, to be followed in four hours with a full dose of salts; my patients remained in from two to five days, and the medicine was repeated daily. I could not fail to notice the superiority of Mr. Collins's prescription over any I had myself given; I had not bled nor did I think bleeding necessary; yet the pride of profession, and the unusual mixture of tartar emetic made this prescription objectionable, until one morning twelve negro men were presented labouring under the same form of fever, and which did not differ materially in degree of violence.

Determined to give each prescription a fair trial, I divided the patients into four classes, each consisting of three. To the first I gave the tartar with one oz. of castor oil, they required no paregoric or anodyne at night, and returned to their work the next morning without waiting for another prescription. To the second class I gave one ounce of salts and one grain of tartar dissolved in half a pint of water, and taken in four equal portions at an interval of one hour; those composing this class were better the next morning,—the medicine was repeated, and they went to work on the third day. The third

class took calomel, and full doses of salts were given four hours after the calomel ; they were all better the second day, but the medicine was repeated on the second and third days, and they were able to go out on the fourth, but less able to work than those who had preceded them. To the fourth class a dose of salts alone was given, and repeated for four successive days ; the medicine was then discontinued, and they went out, but not in the best condition to labour.

This trial of these various prescriptions was so decidedly in favour of the tartar and castor oil, that I have used no other prescription since. To children I generally give a proper dose of castor oil with antimonial wine, and repeat the dose in two or three days if necessary. I owe it to the memory of Mr. Collins, who was my earliest patron and best friend, to say that this prescription has a decided preference over all others which I ever used, and to acknowledge that he is entitled to the credit of the discovery of its superior excellence. The tartar seldom vomits when combined with castor oil ; it makes that medicine more active on the bowels, while it lowers the excitement of the whole system by its sedative effects, and equalizes the diseased action in every part of the body. With this

prescription, barley water or flaxseed tea should be enjoined as a drink, and an anodyne given in the evening if the strength of the patient is much exhausted.

In inflammatory dysentery I have extended the use of tartar with castor oil, and prefer it as well in this form of fever as in diarrhœa to every other medicine. The castor oil alone has long been a common prescription in this disease. Dr. Cullen speaks highly of it, but says there were few Scotch stomachs which would bear it. The oil which the Doctor used was the boiled oil from the West Indies, vastly more nauseous than the American expressed oil, which generally sits well on the stomach, and seldom offends that organ, although it may contain the tartar.

Where the excitement is not speedily subdued by the oil and tartar, and the fever continues high, with violent pain and frequent bloody discharges, with but small quantities of natural fœces, blood-letting becomes a proper remedy, and may be repeated to any extent which the patient can safely bear. I have sometimes used tartar emetic and calomel combined, in this form of dysentery, in pretty large but frequent doses, but it has always produced more distress on the

stomach and been more apt to vomit than the tartar when combined with the castor oil. In cases, however, where the patient has an insuperable objection to the oil, I have found the following recipe the next best remedy. Take of tartar emetic grains four, calomel grains twenty, mix and divide into four equal powders, of which one may be given once in two hours until the whole number is taken. Where they fail to operate on the bowels, salts and magnesia should be given in the evening of the day on which they are taken, to prevent the danger of producing salivation : and this course should be always adopted as often as it may be found necessary to use the calomel and tartar.

In this form of fever, whether the tartar and oil or tartar and calomel may have been used, the medicine will occasionally require to be repeated, as the disease seldom yields to a single dose of any thing. Demulcent drinks should be used freely ; and the bowels as well as the muscles of the patient should be rested if possible by the suspension of the medicine, and by the use of such a dose of denarcotized opium or laudanum as the patient will bear. When and how often it may be proper to repeat the medicine, must be left much to the skill of the

practitioner, who will carefully watch the state of excitement in his patient, and be prepared to change his treatment whenever the fever is disposed to run into the typhus variety ; for it must be remembered that all inflammatory states of fever, and particularly those of the summer or autumn, are apt to, and frequently do, before they can be cured, become typhus. When, therefore, the fever now under consideration becomes so, the best remedies which I have used may be found under the treatment for that variety of dysentery.

The cholera, whether of adults or infants, is the same disease, and (like all other diseases to which they are in common subject) requires exactly the same method of cure ; the indications are the same, and the different subjects of disease must be necessarily placed upon the same plan ; due regard being had to the quantity of the particular article selected which is requisite to produce the desired effect. The diseases of children are as easily understood as those of adults ; the state of excitement on which the cure mainly depends, is quite as easy to be ascertained in the one case as in the other. To most practitioners this is, in every case, a matter of difficulty, but when fully and

fairly ascertained, the difficulty ceases, and every physician, by this knowledge, is placed on a footing. There are articles in the *materia medica* to suit every age and every state of excitement, to adjust and apply which, when the true state of the system is ascertained, the physician feels assured that he has the power to cure the disease, if it is not incurable.

It has been abundantly proved, in a former part of this treatise, that cholera is sometimes inflammatory, particularly in its commencement; and that cholera infantum sometimes continues under a chronic inflammatory form for months.

These cases are, however, of rare occurrence, the great nausea which constantly attends this disease, with the frequent vomiting and copious discharges from the bowels, generally so change the excitement soon after the attack, that when the patient is visited by a physician, every attempt to lower the excitement would be calculated to make another visit useless. We, however, occasionally meet with cases, not only in children, but in adults, where, with a constant inflammatory fever, known by a peculiar small tense and frequent pulse, which is one of the characteristics of inflamed stomach or bowels, the patient has more or less diarrhœa, with oc-

casional vomiting and rapid wasting of the body. Such patients generally possess a craving and morbid appetite, which, when indulged, aggravates all the symptoms of disease, particularly the vomiting. The adult cases are sometimes called dyspepsia, but when neglected or improperly treated, they have the same fatal termination as the cholera infantum. Those adult cases have not been heretofore noticed. In the cure of cholera infantum, in this stage of the disease, Dr. Rush says he has frequently bled ; I have, however, never deemed this necessary in any case which I have seen. But few cases which I have seen were violent or terminated in that stage in which the disease is so fatal in the northern cities. Dr. Caldwell says it is unknown in New Orleans ; and I believe it is much less common, at least in its chronic and most dangerous form, in the southern States than in the northern cities.

Dr. Cartwright recommends the oil of croton in some of the early stages of the cholera infantum, as it appeared at Natchez. I have never used this medicine in such cases ; I have always had some fear of using a medicine for children when a small drop placed on the tongue of an adult will produce violent operations on

his bowels. Where I have used the oil of croton, it has been either in obstructions of the bowels which could not be overcome with other cathartics, or in cases of apoplexy in which the patient could not be made to swallow : in none of the cases, however, where I have used it, has it had any effect, owing more, as I have since had reason to believe, to its having been adulterated than to the genuine article not possessing the virtues for which it is so celebrated.

To adults I have given, in such state of cholera, small doses of castor oil, with a quarter and not exceeding half a grain of tartar emetic ; to children I have given such a dose of the oil and antimonial wine as was indicated by the state of excessive excitement in the blood-vessels, and such as was suitable to their ages. These doses I have generally repeated once in two or three days, and confined the patient while taking them to rice water sweetened with loaf sugar.

The chief reliance to cure this disease, and to prevent its running into that state of typhus in which the patient is soon reduced to a skeleton without dying, is *a well regulated diet*, one that is bland and sufficiently nutritious, but not stimulating. It has been already observed

that the patients have a morbid appetite ; in some cases it is ungovernable ; they crave strong animal food and fruit of all kinds. I once knew an adult creep out of bed and steal and eat so many drying peaches that he was nearly destroyed by the enormity of the meal. The patient should be prohibited the use of all animal food, in any shape of preparation, whether fresh or salted ; of every species of fruit, and of spirits and fermented liquors of every kind. His diet should consist of the fecula of the sweet potato. This article is easily prepared, and should be constantly kept in every family in the United States ; it is not only an excellent diet in this complaint and all others of the stomach and bowels, but it is superior to almost any other in cases of convalescence from other diseases. It may be prepared for use in the same way that arrow root is, either with milk or with water ; but in the seasoning, where it is intended for this complaint, no wine should be used. Where the fecula of the sweet potato cannot be had, arrow root may be substituted. The next best article of nourishment is fresh boiled milk, sweetened with loaf sugar, and a small quantity of finely broken or pulverized cracker thrown into it after the

boiling is over. The milk should never be used after it has become sour, particularly if it offends the stomach. I have, however, experienced the most happy effects from the free use of butter-milk, and even clabber, in a chronic case of this kind which had lasted ten months.

This diet may be varied in its preparations, and frequently changed to suit the appetite of the patient. There is no food which will admit of more different preparations than milk, and there is none which a patient will longer use than boiled milk sweetened to his taste. In this state of fever, as in others of the stomach or bowels, there is much thirst ; to satisfy which the patient is apt to drink more than he can safely bear on the stomach. The drink should be of the mildest and lightest kind, and, if used often, should be always used sparingly ; and where it can be made to contain light nourishment, it is desirable, as it prevents that wasting of the system so common in this disease, and lessens, at the same time, the irritable state of the stomach produced (as has been proved by late dissections) by inflammation. Among such drinks I have found nothing so pleasant, so mild and light, as an infusion of the benhe-leaves in fresh spring water. It contains a

pleasant mucilage, is colourless and tasteless, and will be drank as readily as cold water. Next to the infusion of the benhe leaves may be ranked rice water, which should be suffered to stand until it shall have become cool, and be sweetened with loaf sugar. In either of these drinks, but particularly the infusion of benhe, the patient may be indulged to any extent which is not likely so to overload the stomach as to produce vomiting.

I wish it to be understood that the castor oil and tartar emetic, or antimonial wine, whichever may have been used, is to be discontinued as soon as the active inflammatory state ceases ; and that in the chronic inflammatory state of the disease, the diet and the drink here recommended are to be persisted in until the case terminates in health, or until it runs into that state of typhus of which I propose treating hereafter, and when a new and different mode will be recommended.

In closing this article it affords me pleasure to say that, under the treatment here proposed, I have witnessed those cases to have been frequently cured, and to end with the inflammatory form of the disease into a convalescence which was soon followed with perfect health

In all such cases, however, the utmost caution was necessary in allowing the patient to return to a solid diet of animal food. The stomach long retains its irritability, and an early or free indulgence in animal food was generally if not always followed by vomiting and a return of fever. A single roasted oyster may be first taken, next a little thick chicken soup or a small piece of beef steak, to be used singly and alone, and gradually increased, as it may be with safety, until cold weather braces the system, and the patient may be indulged without danger.

## CHAPTER XXVI.

## ON THE CURE OF THE TYPHOID OR SYNOCHUS VARIETY.

In the cure of this fever there will be little difficulty after the physician has ascertained that the mixed state of excitement really exists, which distinguishes this variety from the others. If he possesses the tact of pulse-feeling he will experience but little trouble, without it he will be more or less embarrassed in every case of fever for which he may be called on to propose a remedy, unless he should follow the mercurial practice, (which was partly the subject of a late chapter,) and if he confides in that, he need not trouble himself to feel the pulse at all, there being sufficient evidence without the pulse to convince him that the case is one of fever.

If the remedies usually employed to cure fever should be improperly used here, they will be soon known to be deleterious without greatly increasing the danger of the disease, although they will retard the recovery of the patient.

The fever is of mixed or intermediate grade, between the inflammatory and typhus. If stimulants are used the symptoms are aggravat-

ed and the inflammatory state is soon manifest ; if depletion, even of a moderate kind, is used, the typhus state, to which it naturally tends, is precipitated. This latter state (although it has been suggested, by Dr. Rush,\* that little should be done until the disease reaches it,) it is desirable to avoid, as the remedies used to cure it do not always readily succeed, because, in approximating towards health, the fever is apt to assume its original typhoid character, and the whole scene is to be reacted on a tired patient and before exhausted nurses.

The typhoid, as well as the inflammatory or typhus, state of fever has its appropriate remedies, which, when properly directed, lead to a healthy issue without either of the other varieties succeeding it. It has been already stated that its most common appearance is in the winter epidemic. I have never seen it embrace all the cases in any one winter so that it could be called the reigning epidemic ; but, in some winters,—for instance, while I am now writing (1829 and 30),—the three varieties of fever are to be seen in the same neighbourhood, mildly inflammatory, typhoid, and typhus, and all

\* Manuscript Lectures.

well marked and yielding without running into each other.

The first and most important remedies in typhoid or synochus variety are *emetics*. They produce no debilitating effect ; they rouse the energies of the whole system and tend to establish harmony between all its parts, by breaking up the morbid associations which constitute the disease. "They, as it were," says Dr. Rush, "untie the typhoid knot." They should be given every second evening. I prefer the evening, because the medicine generally leaves the patient inclined to sleep, and he passes the night without an anodyne, in the use of which some caution is necessary, at least in selecting such as will produce composure without either exciting or depressing the system. In the choice of emetics I prefer emetine to tartar emetic, it acts more mildly and is less apt to produce weakness by too much action on the bowels. A single pill, of from one to two grains where the medicine has been well prepared, will generally operate once or twice on an adult ; a smaller quantity for a child, may be dissolved in a tea-spoonfull of sweetened water. In every case warm balm tea or water should be given, either when the patient is nauseated

or after he shall have vomited, to promote the operation of the medicine.

The scarlatina most commonly appears with the typhoid variety of fever. I have frequently put a sudden stop to the progress of that disease by the early exhibition of an emetic, and prevented the typhus symptoms which, without the remedy, would have formed the termination of that disease.

The second remedy in the cure of the typhoid variety of fever is fixed air. This is universally held as a tonic, it produces less excitement in the blood-vessels than any other, and it is difficult to exhibit it in any form without its acting on the bowels so as to counteract the little deliterious effects which its stimulating properties impart. Where the excitement is excessive, as it sometimes becomes, bleeding and purging have been recommended; but in no case whatever can bleeding be used without danger of bringing on that typhus state of fever which is to be deprecated. Purging to any great extent is also to be carefully avoided. Whenever the excitement is evidently above the healthy standard the fixed air may be so exhibited as to produce all the effect on the bowels which is desirable, and made to impart

its tonic virtues without stimulating the system into excessive morbid action. The common soda powders of the shops, taken in a state of effervescence once in two or three hours, is a form sufficiently convenient to exhibit the remedy. I have, however, preferred giving five grains of bi carbonate of potash, dissolved in a wine-glassfull of sweetened water once in two hours, and half a tumbler of lemonade immediately after each dose of the potash ; where the lemonade is not convenient, crab cider or tamarind water is a good substitute. When it is desirable to produce any decisive effect on the bowels, the quantity of lemonade at each dose may be increased so as to insure that object. The fixed air should be given every day, and during the night if deemed necessary, except on the evening of giving the emetic, when it may be suspended some hours before the emetine is given and need not be resumed until the next day. It is never desirable to give medicine after bed time when it may be safely omitted ; the patient requires rest, and the stomach frequently requires time to assimilate and prepare the medicine given in the day and be ready for fresh doses on the morrow.

The next remedy for typhoid fever is blisters.

This is the only grade of fever in which I have ever thought blisters useful, and the only one in which I ever recommend them. Here they stimulate and evacuate at the same time, and cannot be said either to raise the system towards the inflammatory state or to sink it into the typhus. If the patient has fixed pain the blister should be applied over the seat of it: while they are better calculated than any other remedy to relieve the pain, they, like emetics, serve to harmonize the system and to equalise the excitement. If there is no local pain they may be applied, successively, to the extremities, so as to keep the system almost always under their influence.

The next remedy,—and one which I can recommend from my own experience, and which has been suggested by no other writer,—is assafœtida. This I have combined in equal parts with Castile soap, and made,—without any other material with which to mass them,—into pills, each one of which shall contain one grain of each article. From two to four of these pills is a dose, which may be given in the morning and repeated every day.

They sometimes produce a slight effect on the bowels, promote generally in this state of the system the secretions, and produce no objectionable stimulating effect, and that which they do produce is on the nervous system and results in an improved state of the feelings of the patient.

If anodynes become necessary they should be selected from such articles as will promote sleep without raising the excitement. Here opium or laudanum alone is objectionable; Dover's powder is preferable; but if an emetic has been taken in the evening, and the stomach left in an irritable state, the powder may again bring on the vomiting. I should prefer half a grain of denarcotized opium or twelve or fifteen drops of denarcotized laudanum given in a draught, with six or eight drops of essence of peppermint.

In recommending the foregoing remedial treatment for the typhoid variety of fever, it is not my intention that the practitioner should be confined to a daily routine of exhibiting all the articles here proposed: he must in this, as in every other case, exercise a sound discretion, give nothing but what is calculated to relieve the patient, and select such of those as will

obtain that end without using so much or such a variety as may disgust him or produce oppression.

From the assafœtida and soap I have experienced the very best effects in the cure of what is called, in the southern States, an ague and fever cake : it is an enlargement of the spleen, accompanied by irritative or secondary fever of typhoid character, and has been lately placed, by Dr. Cartright, among disguised fever ; it follows neglected or ill cured intermittents, and frequently lasts through the winter. In the winter epidemic, when met in the typhoid form, this medicine is an excellent remedy.

To conclude, I will only add that, with all, and sometimes with only part, of the foregoing remedies, I have frequently cured the typhoid variety ; that I have cured it without its becoming typhus, and that such an issue, in the treatment of such a fever, if there were no other proof, would satisfy me that the variety is original ; that it has a fair claim to the classification here assigned it ; and that it should be more respected than heretofore, and its true nature more fully elucidated than it has been by those whose chief object is to regulate and control the practice of medicine.

## CHAPTER XXVII.

## ON THE CURE OF THE TYPHUS VARIETY OF FEVER.

However dangerous the doctrine may have appeared to Dr. Armstrong, of those systematic writers who have "almost entirely overlooked many of the most essential parts of his first and second stages of typhus ; and by having dwelt particularly upon what he terms the last stage, and enforced the doctrine that typhus is always a disease of debility ;" I cannot agree in the propriety of his criticism any more than I can in that of his classification of typhus from his mere suggestion that it should be so arranged because it was contagious. On the contrary, while I believe with all the ancient and modern systematic writers that typhus is a real state of fever, of direct debility, I cannot approve of that arrangement of the Doctor in which he has classed with typhus a fever the first and second stages of which are really inflammatory, accompanied with oppression, or that which is so considered by some of the most respectable medical authors, with the indirect debility of Dr. Brown, and with arterial congestion of Dr. Armstrong

himself. Many of these diseases, by his own shewing, were cured by the best established plan of the depleting system, without ever descending into the third stage of real or direct debility.

The attentive reader will have perceived that I have endeavoured to establish the doctrine that in all the classes, orders, genera, and species of fever enumerated by nosological writers, this theory of but one fever, if sought after, will be frequently found without regard to their classification. If the facts which have been here adduced to sustain that opinion should not be such testimony as he chooses to rely on, I beg him to pause before he condemns the doctrine as erroneous, and examine such cases as he may occasionally see either among the winter or summer epidemics to find a full confirmation of every thing said here on the subject. Should he find his conclusions favourable, his practice will become less embarrassed, more safe, and less troublesome, and will lead to results more favourable to the safety of his patients than any foundation on which it may have been heretofore placed.

The typhus variety of fever has but one stage, that in the winter epidemic is frequently accompanied with local pain, which has determined

the name of the particular fever, according to its situation, among all those writers who have considered such an accompaniment as constituting essentially the fever to be inflammatory. The stage is sometimes long when appearing in the winter epidemic as well as in that form under which this variety was formerly confined when it was called the nervous or slow fever, and which happens in every season of the year. In the intermittent, remittent, and eruptive states of fever, when accompanied with this variety, it is comparatively short, and by proper treatment may be speedily cured.

It is, however, accompanied with many grades of diminished excitement, some so little deviating from health that, if the patient is left to instinct, it amounts barely to indisposition, and health returns without medical aid ; while in another person and at the same time the prostration is immediate, the circulation so languid from the loss of the vis a tergo in the heart, and the exhausted state of the excitability, that the patient sinks rapidly, and dies without the possibility of producing a reaction in the arterial system.

Dr. Brown is certainly incorrect in the formation of his scale in which he makes the state of

excitement and excitability exist in an inverse ratio to each other. They run in parallel lines : thus, when the excitement is exhausted, as in typhus, the excitability is also diminished, and it requires the same means, according to the grade of exhaustion, to rouse both ; so that a patient will bear a much larger quantity of stimulants in typhus than in health. Again : in inflammatory fever, according to Dr. Brown's scale, the excitement is accumulated ; I say the excitability is equally increased, for in a high grade of this fever the light or even conversation may become a cause of excitation.

The great desideratum in the cure of the typhus variety of fever is to proportion the means so as to arrive at the end with the most ease and greatest expedition. The best physician may sometimes, when not on his guard, mistake the oppressed or suffocated state of the inflammatory variety of fever, or the arterial congestive form, according to Dr. Armstrong and other late writers, for typhus ; but it rarely happens that typhus is mistaken for the inflammatory variety of fever, except by those who have little power of discrimination ; to such no rules would be availing ; to others the distinctions have been, I presume, already sufficiently defined.

Where this disease appears (as it frequently does) in the form of winter epidemic, it is most generally accompanied with fixed pain in some one functional organ of the system, or in the surrounding membrane; in such cases, as well as those that are described by Dr. Cullen and other systematic writers, a protracted fever is to be apprehended, except in the most mild cases of the winter epidemic, which I have termed mere indisposition, and which require no particular medical prescription. Thus in the typhus mitior and typhus gravior, of Dr. Cullen, there is not often fixed pain, but in both species, as made out by the Doctor, the fever is of long continuance. In all such cases, whether with or without local affection,—I mean where the course of this variety is not to be arrested under any treatment in a short time,—it is best to begin with an emetic, either of ipecacuanha or emetine. This remedy is not in opposition to the course which is indicated. Emetics, it has been already stated, do not reduce the strength of the patient; in this case they seem to rouse the energies of the heart and arteries, and prepare the stomach for a more perfect assimilation of the food and medicine which is to be relied on to effect a cure.

The second and most important remedy is the sulphate of quinine, given to an adult in the dose of one grain once in two hours, and to younger subjects in such smaller quantities as may be suitable to their respective ages. I have never found larger doses of the quinine do more good than doses of this size ; I have never been willing, in the gravest cases, to trust to smaller. I know it is the practice of the German and Italian physicians to use it in much smaller doses, and it may possibly be the case that in the United States, where it is used at all, more is given than in any part of Europe. In Dublin I believe half a grain is a common dose ; and Magendie informs us that his quantity is about eight grains in twenty-four hours.

Where the case is mild it will be sufficient that the patient take it during the day only and until bed time, when he may be allowed an anodyne and remain without the medicine until morning. Wine whey is an important drink in all such cases, the strength of which should be increased in proportion to the deficiency of excitement ; besides its stimulating quality, it contains much nourishment in a light agreeable form, and may be used without danger to any extent to which the patient will take it.

In the typhus gravior of Dr. Cullen, or in one which sometimes occurs with such violent symptoms as to justify the appellation of malignant typhus from its terminating fatally in a few days, this course should be continued not only during the day but throughout the night, and besides the wine whey, which may be here made the common drink of the patient, a glass of good madeira, sherry, or port wine, should be taken after each dose of the quinine. Where the wine cannot be obtained, or the patient prefers it, French or old apple brandy and water, or made into toddy, is a good substitute. The strength as well as the quantity of the liquor which may be preferred should be regulated according to the end designed to be obtained ; and when there is but little excitability to be operated on, the brandy may be administered with perfect safety and great advantage in its undiluted form.

The next remedy is opium. This, besides its stimulating quality, produces more composure than any other remedy. The patient is frequently if not always restless, his mind is confused, and he is sometimes delirious, so much so that without large doses of opium he becomes unmanageable without several assistants to con-

fine him to bed. The opium alone will be effectual, and may be repeated twice or three times in twenty-four hours, so as to keep the patient constantly under the influence of its stimulating and anodyne properties.

The next and most important remedy in this form of the typhus variety of fever, is nourishment. On this alone it seems the Italian physicians lately depend. They have no doubt adopted the opinion that the fever will run its course under any treatment, and that nourishment will sustain the patient until the fever has run its course. But I presume there is no American patient, if there is a physician, who would feel justified in pursuing such treatment. If the physician withheld medicine, and the patient's mind was not entirely alienated, he would be apt to obtain it from some other source, and, whether right or wrong, use it. For my own part, had I a patient to die under such treatment I should consider myself as having been guilty of the most criminal neglect. Nourishment is, however, a most important and indispensable remedy, and without which every other must fail. A patient cannot live through the long course which this form of the typhus variety of fever sometimes runs, upon quinine, wine,

and brandy, or even porter, which is an occasional auxiliary. His system must be sustained by something calculated to repair the wear and tear of disease ; he could not even in health subsist on account of the waste which the stimulating remedies themselves produce. Here nourishment imparts that permanent vigour to the system which is not to be acquired by any other means, and it should be administered as often and with as much regularity as the quinine itself.

Fortunately for the patient, the stomach, in this disease, possesses as little excitability as any organ or part of the system ; and the patient, unless too delirious to take medicine, will seldom refuse nourishment. Farinaceous articles, as the fecula of sweet potato, arrow root, and the various preparations of rice, contain (according to the quantity used) more nourishment than any diet used in the United States ; they are easily digested, and should be preferred. To this class may be added panado, made with stale bread or biscuit. With or without these milk will be found beneficial in all the various forms, in which it may be used with propriety. Next in importance to milk are animal jellies, soups, made thick, of which turtle soup has the

preference ; beef tea, eggs, if they can be eaten, and game,—as venison, birds, &c. In every case it should be the study of the physician to suggest daily some change of the article in use, if the patient complains of it, or some new article which he has not before had. Tea, coffee, and chocolate, may at any period of the disease be freely and profitably used, unless when they interfere with some article of diet or medicine, the use of which is deemed indispensable.

Blisters, which have been long deemed a remedy in this variety of fever, and have been used to denote the danger of the patient from the number to which he had at the same time been subjected, I abhor. In very low grades of action, where the surface is cool and possesses but feeble circulation, they have no effect at all. In every case where they act, while their stimulating power is evanescent, their debilitating effects remain as long as any drain is produced by them, and they often become troublesome ulcers and confine the patient to the house after his disease has been cured by other means. In local pain the same objections attend, and I never use or recommend them.

In the treatment of such affections I prefer, to every other local application, hot spirit of tur-

pentine, applied on folds of flannel in cold weather, or on cotton in warm weather, to remain on until some redness is produced on the surface, and the patient complains of heat or smarting ; and to be repeated as the patient can bear it until the cause for which it has been recommended may be removed. Cataplasms of mustard are vastly preferable to blisters ; their stimulating powers are less transitory, while they are less apt to produce effusion. Mush or bread, with Cayenne or red pepper, often afford relief ; flannel cloths wrung out of hot water or spirits are also useful, and when the pain is seated in the bowels, or diffused over a wide space, they are preferable to every other local application. I have used the hot spirituous vapour bath in the lowest or malignant grades of the typhus variety of fever as occurring sometimes in the winter epidemic, but never with any decided advantage.

In all the varieties of fever, and particularly in the one now under consideration, the cure is greatly secured by a large well ventilated room, in which the temperature of the air should be so regulated as to make it perfectly agreeable to the attendants or visitors. Where the patient resides in a district notoriously infected, his fever

will be cured sooner, and his convalescence more rapid, if he can be removed to a place where no infection exists ; he will besides escape the danger of a relapse.

I have purposely omitted the recommendation of cold snake-root tea, volatile aromatic spirits, and other remedies which were once fashionable to cure this variety of fever. The quinine alone supercedes the use of all such articles, and when it fails to produce a cure, with the other means already noticed, it will be in vain to expect it from the addition of any other articles.

I have said nothing here of the state of the bowels ; it must, however, be apparent to any one conversant with the practice of medicine that, under a course like that recommended, it would not be consistent to open the bowels at the risk of suspending the plan here laid down. If, however, costiveness should produce any inconvenience, it may be obviated by the free use of ripe fruits, which are always refreshing to a sick person, and here add nourishment, which constitutes a principal item in the cure. Costiveness may be also relieved by the occasional use of mild laxative injections, or when the patient is a female, or where there exists any prejudice or objection to the use of glysters, small

doses of Henry's calcined magnesia may be substituted.

In the cure of intermittent or remittent fever of the variety of typhus, less formality is necessary than when it may be seen in the form of Dr. Cullen's typhus mitior, or typhus gravior, or in the winter epidemic, where it is sometimes very malignant and most generally attended with catarrhal symptoms, and with fixed pain. The intermittent and remittent varieties of typhus frequently constitute the greater portion of the summer and autumnal fever of North Carolina, and, with a few occasional exceptions, have formed the grade of all our summer and autumnal fever during the last five years.

The patient is attacked with chill or ague, which is generally of long continuance. Children who may be weakly sometimes die in the first ague, but are more apt to do so in the second, where no particular attention has been paid to their disease. The onset of fever is accompanied with great restlessness, thirst, and irritability of the stomach, with disposition to vomit. It would be but a waste of time, if not dangerous, to begin the cure with an emetic; the patient will be found too restless to bear it.

The first indication, and the one absolutely

necessary to effect an immediate cure, is an anodyne. This may be given in solid opium, or in laudanum and peppermint, to such an extent as will ensure composure, due regard being had to the age and habits of the patient ; and warm wine whey substituted for the tea or cold water which had been most probably used by the patient. Quietude, with a disposition to sleep, soon follow the anodyne, so that within an hour after the anodyne has been administered the physician may ascertain with perfect certainty the character of the fever. In this variety of typhus the pulse will be found quick, frequent, and weak, the face will be flushed, the temperature of the body higher than in patients with the typhus mitior or gravior of Dr. Cullen, and some disposition to perspiration or moisture about the neck and breast. Here the quinine, with wine or brandy toddy, or porter, if the patient prefers it, should be commenced and continued in the way already recommended through the whole fever, day or night, as it may happen to be, and through the intermission or remission, as the case may be, and with a fair prospect, if the fever should happen to be intermittent in its character, of the patient escaping another paroxysm ; or, if remittent, of his not having more

than one other return of fever, and that in a mitigated form.

The practice of giving tonics in the paroxysm of fever is not new. It was followed by Sydenham, by Dr. John Clark, and his contemporaries, with great success. They gave the bark in substance, and in large doses, through the whole fever, and relied on it almost entirely as a specific in the cure of intermittent, remittent, and billious fever. The practice in Europe, as well as in the United States, seems of late years to have been disused; it has been found that the stomach did not bear the bark as well in the paroxysm of fever as in the intermission or remission, and the administration of the bark has been for many years confined to that period of the disease. Since the introduction of quinine the objection has ceased, and with it the practice should also have been changed. In this variety of fever the stomach bears the quinine and its auxiliaries quite as well in the paroxysm as in the intermission or remission of fever, and according to my experience the medicine is equally, if not more, effectual in checking the disease or preventing a return of fever. Considerable time is gained by such practice, and the probability is that the disease will, under this course, be

as certainly stopped after the first paroxysm as it will be after the second, if we wait to exhibit it only in the intermission or remission of fever.

Another advantage in this practice is that the physician is not under the necessity of ascertaining whether the fever is quotidian, tertian, quartan, or double tertian; nor need he care whether the fever is intermittent or remittent. When he is satisfied of the type of the fever he has only to order the anodyne to be repeated on the return of each paroxysm, and to continue the same prescription until a cure is effected; so that in a family conversant with the use of medicine a single visit from a physician may cure every case which will probably occur in the same family for a whole season.

The wine whey, if drank freely, with the fruits of the season, will be sufficiently nutritious during the paroxysm. In the intermission or remission the patient will be willing, if not anxious, to take more nourishment; here he may be indulged in turtle or in any other thick rich soup, in milk, coffee, tea, or animal food; in such cases they all become remedies, and may be used to any extent in such articles as the appetite of the patient may crave, or his stomach will bear.

The typhus variety of fever occurring in the form of dysentery is to be treated on the same plan, with some modification in the use of quinine, which should always be regarded as the most valuable remedy in this fever, in whatever form it may appear, or under whatever name it may be known in common language, or in the language of systematic writers. It has, I am aware, been long the established practice to rely on cathartics to cure dysentery, under whatever form it might appear. That this practice has been carried to a mischievous extent few physicians can now doubt, who know how necessary it is for the bowels, as well as the muscles, to have occasional rest in the cure of every form of fever. In this variety of the dysentery, strong cathartics are always improper. Calomel, although much relied on, is totally inadmissible in any dose in which it may be given. I have myself known a single grain of calomel, with the same quantity of opium, given to an adult patient, (before the introduction of quinine into practice,) produce ptyalism, with such an increased irritability of the bowels that no after remedy could save him, and he died completely exhausted in a few days after the salivation commenced.

In this variety of dysentery the fever is generally of a remittent character; gradually rising in the afternoon of each day, and continuing about twelve hours, and remitting towards the following morning. The discharges from the bowels are frequent, they are painful, and the fœces are generally retained. The pulse is weak, small, and frequent; there is an evident shrinking of the countenance, a dejected look, and disposition to cry. The whole system is prostrated, accompanied with a rapid wasting of the body and of muscular strength.

The indications of cure are to lessen the frequent painful discharges, and to sustain and invigorate the system, while the fever, which is the primary affection, is to be cured. To effect these various indications the patient should take freely of boiled milk, with some agreeable farinaceous substance and sugar. He should take the quinine freely during the remission of fever, with French or apple brandy, toddy, or wine, which contains but little acidity. On the recurrence of fever, which happens generally every evening, and when the irritability of the stomach will not bear so well the quinine and toddy, they should be discontinued until the remission of fever, or until the following morning,

and a dose of laudanum, of sufficient quantity to compose the patient for several hours, given, in which should be mixed a sufficient dose of Henry's calcined magnesia to insure a natural discharge from the bowels, after the anodyne effect of the laudanum may have passed off. The patient may eat freely during the night of the ripe subacid fruits, or of cooked dried fruits when fresh ones are not to be procured. He may drink rice water or flax-seed tea. These articles, besides the nourishment which they contain, will aid the magnesia in procuring a natural discharge from the bowels, which is always accompanied with singular relief, and should be obtained at least once in twenty-four hours, when it may be safely effected without a diminution of those means which are calculated to cure the fever, which here is the primary disease, and which it must be the main object to remove, because in effecting that the symptoms will cease.

I have here described the practice for a single day ; the same must be pursued every day until a cure is effected, with such a modification of the remedies as the various symptoms may justify, keeping constantly in view the indications. Where magnesia fails to produce the

desired effect, castor oil may be given with the anodyne, with equal propriety and with greater certainty ; it does not debilitate like most other cathartics, and is more apt to produce discharges that are natural, more consistent, and less watery.

That the yellow fever of the United States is sometimes to be seen in the variety of fever marked in this treatise as typhus, I have not had sufficient experience myself to justify me in thus positively asserting. But from the admission of others, and the practice founded on it, which has been already stated, from the analogy in all the other fevers, as treated by systematic writers, and from the classification of this disease by European writers, I have no doubt myself that such is the fact. I cannot, however, vouch for the correctness of the impressions of others, but I shall take the freedom of quoting Dr. Cullen's definition, who of himself is high authority, and whose opinion I believe is consonant with that of the later physicians of Spain, where the disease is more prevalent than in the United States. Dr. Cullen defines it "typhus (icteroides) cum flavedine cutis." He makes it correspond with "*Febris flava Indiæ occidentalis*, of Warren." "Malignant fever of

Barbadoes." "Hillary's diseases of Barbadoes."  
"Linning on the yellow fever of South Carolina."  
"Edinb. Phys. Litter. Essays, vol. 2."  
"Mackittrick de febre flava Indiæ occidentalis,  
Edinb. 1766."

I would not be understood as inculcating a doctrine that such is always the grade of yellow fever in the United States; facts shewing that it is often inflammatory are too abundant and respectable to admit such a conclusion. Yet I would most respectfully suggest to such of my brethren as may reside in cities which are subject occasionally, or annually, to the visitations of this cruel scourge of the human race, to expect its appearance sooner or later in its typhus character, and be prepared to treat it with quinine and strong stimulants at the very onset of the fever, or as soon at least as the patient can be composed with a strong anodyne. To wait for a remission, or second paroxysm, would in most cases be fatal, the march of the disease is so rapid and disorganizing that some important organ, material to life, may be destroyed in the first paroxysm, and the after operation of remedies would be most probably useless. In determining this point strong evidence would be afforded by the character of the milder form of

fever which has preceded it, or which may exist at the same time in an adjoining district not infected with the miasmata of yellow fever. If such a fever has yielded to such practice, strong hope may be entertained that yellow fever will yield to it, and at any rate it promises the most safe and efficient practice. Spirits of turpentine, which is a strong stimulant, has been beneficially used by Dr. Chapman and others in Philadelphia. Why should not the opium quinine and brandy be preferable ?

## CHAPTER XXVIII.

CURE OF CHOLERA, DIARRHOEA, AND DYSENTERY, AS  
THEY OCCUR IN THE TYPHUS VARIETY OF FEVER.

It has been well established, here and elsewhere, that cholera *sometimes* appears in the inflammatory variety of fever. I say *sometimes* because in North Carolina, as far as my observation extends, that of infants particularly is most frequently met in the variety now under consideration. The first symptom of the disease is a sense of coldness, as well in infants as adults; nausea and vomiting soon succeed, accompanied by frequent, and sometimes simultaneous, evacuations from the stomach and bowels, of watery or billious matter. The patient soon becomes weakened by these constant discharges and nausea, has a disposition to faint on getting up, if an adult, or on the least motion if an infant, and sometimes dies whether infant or adult in twelve hours.

Where the attack is less violent, and the evacuations become sufferable, an adult soon recovers, and requires no attention from the physician. Not so in cases of cholera infan-

tum : here the typhus fever continues, the child has every appearance of prostration ; his pulse is extremely weak, quick, and frequent ; his features are shrunk, the skin appears loose and wrinkly, his eyelids remain open, and even in sleep his eye-balls are apparent, white, and glossy. He vomits occasionally, though less frequently than in the onset of the disease, and the discharges from his bowels continue frequent, large and watery, and if not speedily checked, carry him soon to the grave.

Formerly this disease was most commonly fatal ; we possessed no remedy which could cure it. Calomel, however safe in the inflammatory variety, is here out of the question—it aggravates every symptom of the disease. Bark in substance or decoction could not be borne on the stomach or in the bowels. Blisters became gangrenous, and the death of the child was frequently charged by the parents to their agency, and the person who ordered them was thought, and sometimes said, to have committed murder. Happily for children, and more so for their mothers, a preparation of the bark has been discovered, so concentrated, yet so mild, that it may be safely and freely given. The sulphate of quinine, as well in this as in

the intermittent fever of the typhus variety, is the grand specific. If it had been useful in no other disease except this alone, it would have entitled the author of its discovery to the everlasting gratitude of every mother in the southern States, where the remedy has or may be introduced in the cure of a disease by which one fourth of their progeny might have perished. Gratitude alone is an inadequate feeling to express the innumerable benefits resulting to mothers from the discovery of this divine remedy. Where lives the mother who thinks it is, who has been compelled to hold or confine every muscle in a child's body, to hold his nose, force open his mouth, and pour dose after dose of the bark in substance down her child's throat, interrupted by screams, suffocation, and spasms? Were I a lady of high standing and fortune, I would propose the formation of a society, to be called the "Female Quinine Society," to embrace the whole United States, with the avowed design of raising, by subscription, not only money enough to furnish all the poor children in the United States with quinine, but enough to render Monsr. Pelletier (the author of the discovery) as rich and independent as the first peer in France.

In the cure, then, the quinine is to be regarded as the "sine qua non." I have generally prescribed from a quarter to half a grain (according to the age of the child) once in two hours. I have preferred using it with some astringent mixture containing laudanum, and have found nothing succeed so well as the cretaceous mixture of the shops, containing either the tincture or powder of gum kino or catechu, and gum arabic, with about one drop of laudanum, or less where the child was young, to each dose. The quinine should be dissolved in the mixture, so that to each drachm of the mixture there may be a full dose of quinine, and as much laudanum as it would be prudent to give a child who is to repeat it once in two hours, day and night.

With this mixture French brandy toddy, made with the infusion of benhe leaves, is the most proper drink, it agrees better with the stomach than wine of any kind, and is taken most willingly by the child when cold water is withheld, for which he has an insatiable thirst. The diet should be light and farinaceous. The fecula of sweet potato, prepared with water, and sweetened with loaf sugar is an excellent article, between which and arrow-root there is not so

much difference but that the arrow-root may be substituted in the absence of the other. Boiled milk may be given, with a small portion of water when the milk is too heavy of itself to remain on the stomach. Beef tea is excellent. Chicken water, and even rice water, may be used where the child becomes tired or disgusted with the other food. Whatever is preferred and agrees with the stomach should be given often and in small quantities. Blisters are inadmissible for a reason already given; but if the stomach is very irritable, and the bowels are painful, the whole abdominal region may be rubbed with a liniment composed of equal parts of the rectified spirit of turpentine, and aqua ammonia, known in common language as water of harts-horn. On the decline of fever, and of irritability of the stomach, the child may be permitted cautiously to eat oysters, animal food, thick pap, and soup; but in all stages of his complaint the breast of his mother should be regarded as the chief source of nourishment.

In diarrhœa, when it either commences with the typhus variety of fever, or becomes so after having been inflammatory, the same treatment as proposed here to cure cholera is the one most to be relied on. In the use of the quinine and

brandy toddy the quantity ordered may be more restricted, and need not be continued through the night, but the utmost attention in the diet is necessary, and the strongest watch should be placed over the patient to prevent too free an indulgence of an appetite which is apt to be morbid.

Dysentery, in its idiopathic form, is frequently a typhus febris introversa, and it is just as apt to become so when inflammatory in the beginning as any other form of fever. Here the friends of calomel should retire ; their universal remedy salivates in large doses, and in a dose of a single grain ; it is objectionable in every form of typhus fever. It produces offensive, deep spreading ulcers in the throat and fauces ; the patient insensibly swallows the sanies which they produce ; this sanies is of a putrid character, and is the source of the very fever which the remedy is intended to cure. I have scarcely ever known a recovery from typhus fever where the patient had been salivated, whether from accident or design.

The cure is to be effected with the quinine, prescribed as in cholera, with such attention to the state of the bowels as the symptoms require. The bowels are generally constipated, although

the most troublesome symptom in the disease is frequent, small, and painful discharges. For that reason it would be preferable to give the quinine without the laudanum, but to use the French brandy toddy, and the nourishment, as it has been under that head recommended. While this treatment is persevered in according to the urgency of the symptoms, proper means should be used to produce natural discharges from the bowels, without the risk of using such remedies as may salivate or debilitate the patient by too copious evacuations. To effect this object I have found nothing succeed so well as Henry's calcined magnesia in sweetened water, to which should be added castor oil, and given in small and repeated doses, so as to produce daily one natural discharge from the bowels. The quinine and toddy are not to give way to the magnesia and oil, but after these shall have operated the patient may be indulged with a dose of opium sufficiently large to quiet the pain and irritation in his bowels and procure several hours' sleep. This then should be the daily course : quinine, toddy, and nourishment, with magnesia and castor oil, until a natural evacuation from the bowels has been produced, which should be brought about by the evening ; then

opium at bed time, with quinine, brandy, and nourishment, until morning. The magnesia and castor oil may be discontinued so soon as the discharges become natural ; the opium as soon as the bowels become easy and the discharges not frequent ; but the quinine, brandy, and nourishment, should not be withheld until the patient is cured.

## CHAPTER XXIX.

CURE OF MISPLACED OR DISGUISED INTERMITTENT  
FEVER.

I have added three complaints to the list of medical writers on this subject. The phlegmasia dolens, the jaundice, and the gout, including in this latter term the rheumatism.

And first, of the cure of phlegmasia dolens. Of the nature of this disease there is no agreement among those who have written on the subject ; various causes have been assigned, and a connection with the lacteal secretion seems to be relied on by most of them, for no reason, which I can discover, except that the complaint is confined to child-bed women. The disease occurs, however, in healthy, in scant, and in redundant lactation, and its true cause must be sought in some other source. I have derived it from miasmata, which I have supposed may have been suspended in its operation, like consumption, by pregnancy, and produces this peculiar tumefaction of one of the lower extremities by attacking the glandular system, in which I include the lymphatics of the affected side. How far preg-

nancy may determine the *modus operandi* of the assigned cause, is not for me to say ; but that it does exert considerable influence in that way, is not to be doubted, since none but those who have been recently relieved from that situation are known to have the complaint.

The fever attending this complaint is supposed, by Dr. Good, to be hectic. This supposition cannot, however, be correct, as hectic is universally acknowledged to derive its source from the absorption of matter or pus. In this disease there is no pus, and consequently the hypothesis has no foundation. The fever is secondary or irritative, having its origin in the pain which always accompanies the disease and precedes the swelling. It is, however, marked as other fever is, with the peculiar variety which denotes the state of excitement ; and I ascribe the various methods of treatment recommended by different authors entirely to the different grades of action having led them to the different remedies, each applicable to cure it in that variety which happened to be noticed by them respectively. When the pulse is strong and active, denoting excessive morbid excitement, purgatives, which are freely recommended by Dr. Good, are the most appropriate remedies. Perhaps there is no

plan by which we could succeed more certainly than that recommended in the cure of intermittent fever, of which this is but another form. The inflammatory action, if it exists at all, is but moderate, and a single cathartic is generally sufficient to reduce it. As soon as that subsides, the cure is speedily effected by the quinine during the day, and anodynes at night. Some attention must, in the mean time, be paid to the pain and swelling of the affected limb. Where the action denoted in the pulse is excessive, mild fomentations of warm water or warm olive oil are the best remedies, and should be applied with but little friction. When, however, the action in the system is weak, the limb should be freely rubbed with a warm hand covered with volatile liniment, or some other stimulating ointment, and wrapped up with a spiral bandage of linen, cotton, or flannel, as is most suitable to the temperature of the air.

In jaundice the apparent fever is generally very obscure, the irritation, however, more or less, and, as evinced by the pulse, it is commonly of a typhoid character. Emetics have been considered, by most authors, the chief remedy to cure it, but they often fail; the patient soon becomes disgusted with their operation, and they

are not generally sufficient, in the way they have been given, to remove the disease. The secretion of bile is vitiated, the biliary pores are overloaded, and the passage from the receptacle of bile to the intestines is obstructed, while the liver is oppressed with the inordinate fulness of the vena portarum and biliary pores.

The indication of cure is to relieve the oppression of the liver, and to remove the obstruction which prevents the natural egress of the bile. This being done the appetite returns, and the yellowness of the skin, which affords the name to the disease, soon disappears.

The remedy on which I now entirely rely to accomplish this indication, is a combination of tartar emetic and calomel ; for which purpose

Take of Tartrite of Antimony grs. iv.

Calomel ppt. - - - " 20, mix intimately and divide into four powders. One of these powders is to be given to an adult, in thin syrup, once in two hours, until the whole are taken, he drinking during the time plentifully of warm balm tea or some other light fluid. The medicine operates generally severely, but it most commonly produces billious discharges, and it is seldom necessary to repeat it after the first day. Where, however, it fails to

produce such discharges, it may be repeated after a rest of one day, when I have never known it fail to effect a cure, without salivation and without any violence to the patient, except that to which he would have been subject with the same number of doses of tartar emetic alone. I prefer and would recommend this prescription, even should it become necessary to repeat it on three or four days, before any or all the remedies I have ever used or have known advised in the cure of this disease.

The gout has been arranged under misplaced or disguised fever, and although the fever, after it has been developed in the blood-vessels, is to be regarded as secondary or irritative, as it is the consequence of pain, yet, in the different subjects, and in the same subject in different attacks, that action in the blood-vessels, as has been already shewn, is in some cases inflammatory, in others typhoid, and again in others typhus, and must be so classed in order that the appropriate remedies for these different grades of action may be successfully applied to remove the disease.

The atonic gout of Dr. Cullen, and of others who have followed his arrangement, has no existence in this treatise. If the symptoms arose

in the Doctor's fancy which induced him to give name to such an indisposition as atonic gout, he might with more propriety have classed it with hypocondriasis or dyspepsia, and perhaps it would have been still more appropriate, like the "latent headache of Lady Anguish,"\* to have called it the latent gout.

First, of inflammatory gout. The cure of this variety of gout is to be effected on the same plan, with some modification, as that already directed for the cure of the inflammatory variety of the winter epidemic. This disease, like that and like the remittents of autumn, is very billious. Large doses of calomel and rhubarb, such as were prescribed in the inflammatory winter epidemic, are equally proper here. They may be repeated every second night, and followed on the next morning with Epsom salts and magnesia, or this last prescription may be given on the intermediate day.

Bleeding, which was directed in the winter epidemic where the calomel failed to produce speedy relief, is in the gout inadmissible. I am aware that Dr. Cullen prescribes bleeding, but he seemed himself not to rely more on the efficacy

\* Moore's Edward.

of that than any other remedy, and was best satisfied with what he believed the only safe plan, viz. : to commit his patient to flannel and resignation. He, it is true, regarded the disease as an effort of nature, tending to produce health by restoring to order the deranged balance of the different functions of the system, and by promoting a unity of sound actions in the whole body. He was right, therefore, not to disturb this plan of nature, but to enjoin patience until her object was accomplished.

Dr. Rush not only recommends bleeding, but he advises that it should be repeated in large quantities, and he speaks highly of the remedy. To this respectable authority I shall oppose that of Mr. Abernethie, more modern and entitled to equal credit. The last named gentleman states that bleeding is improper and injurious in the fever which occurs in wounds from irritation. This fever occurs from the same cause, *pain*, is secondary, and bleeding is equally improper and injurious. The blood-vessels, and all other parts of the system, are rendered more irritable by blood-letting. This fact must have been observed by every practitioner in medicine who has had frequent communications with persons who have been in the habit of losing blood.

The system then being made more excitable, blood-letting, and the pain which produced the excitement, still continuing or recurring, as it usually does once in the twenty-four hours, the fever is thereby augmented, and the indications for repeated bleedings continue until a large portion of the circulating mass may be extracted, and still the force and frequency of the pulse are augmented, and the remedy must be discontinued, or the patient sinks under the very remedy proposed to relieve him. If the patient who has been freely bled recovers, this increased excitability follows him through life, and he becomes so liable to a fresh attack of disease, from a more slight cause than heretofore, that he can never be said, in a country like ours, (where there is more or less of miasmata floating at all seasons in the air,) to be fairly exempt from the disease; where the cause is not sufficient to produce a violent attack, it occasions some one or more of the symptoms, and the patient is compelled, as a dernier resort, to become an habitual opium eater.

The doses of calomel and rhubarb, although not so specific in this variety of gout as in the inflammatory variety of winter epidemic, are incomparably better than any other remedy

which I have used to cure this form of the disease. The calomel is not a new remedy ; it has been used and recommended by Dr. Rush, and if it has not sustained the fair character which he has given, it is not owing to the want of excellence in the remedy, but to the indiscriminate use of it, and to its having been injurious in the typhus variety of the disease, which is reserved for another section. The calomel and rhubarb then may be repeated every second day, with salts and magnesia on the alternate days, or on the same day if the calomel and rhubarb do not operate freely, until the patient is relieved, or until there is danger of salivation. Whenever the latter event is to be apprehended, or whenever the breath affords indication of its approach, the calomel should be discontinued and the antiphlogistic treatment continued, if necessary, by a recourse to salts and tartar, in small doses, low living, and diluting drinks.

It will be expected in all cases, and it is of much importance, that such a local treatment should be pursued as is best calculated to relieve the patient of the pain, which is always regarded as the prominent if not sole disease. Heroic cold applications are in accordance with the general treatment, and are the best remedies.

Dr. Good used cold in his own case, by emerging his feet into cold water, with the best effect, and without (as was apprehended by his family) repelling the pain from his extremities and fixing it on some internal organ. I should prefer aspersions of cold water, of cold water with vinegar, or of cold spirits of camphor, to emersions. They may be longer continued without becoming warmed by the heat of the limb, and the evaporation from the surface increases the coldness of the application.

Dr. Rush recommends exposing the pained member to the action of the cold air by removing the bed clothes ; this often affords relief, and it would be well to test its efficacy before the application of cold water. He also recommends a pancake covered with molasses ; this requires frequent repetition, otherwise the pancake soon becomes heated and loses its refrigerating quality.

Anodynes are indispensable ; without them the patient passes a restless, miserable night, and becomes much fatigued and dejected by morning. Laudanum or opium is inadmissible ; they are both too stimulating, are forbidden in all cases under a refrigerant treatment, and serve, in this complaint, greatly to augment the

heat and fever. The *vinum colchicum* is here an excellent anodyne. It has been used in France under the name of *Eau de Medicinale*, as a secret remedy to cure the gout. I do not believe it ever deserved the name of a remedy to cure the disease ; if, however, it was ever entitled to be so ranked, it soon lost its character, like all other specifics, from having been used indiscriminately for the cure of all the varieties of the complaint, in all of which, except the one now under consideration, it is worse than a doubtful remedy. It is either a powerful sedative, or it possesses the quality of lessening the excitability of the system ; the patient becomes insensible of pain, and passes the night under a moderate dose of it with much more composure than he would have done without it. From ten to twenty of the drops may be given in any convenient vehicle, and repeated every hour until the patient shall have taken from forty-five to sixty drops, unless the pain should be sooner relieved, after which the medicine may be discontinued until the following evening, to give place to such other means as are adapted to afford permanent relief, or to overcome the attack.

The denarcotized opium or laudanum, when

the colchicum fails to afford relief, or cannot be had, may be given in a full dose with perfect safety, and great diminution, if not perfect suspension, of pain.

In this method to cure the gout, the reader will bear in mind that I intend to include what has been termed inflammatory or acute rheumatism. I have considered them the same disease, derived from the same origin, and to cure them they should be subject throughout to precisely the same plan of treatment.

This variety of gout, like the same variety of fever, under whatever name it may pass, is equally liable to run into the variety which I shall hereafter propose to cure when it occurs in a typhus form, and when the cure depends upon the same general principles as if the disease was an idiopathic typhus.

The typhoid variety of gout, as has been already stated, is most apt to occur in females. It affects the stomach, the bowels, the shoulders, the elbows, the kidneys, and sometimes, for short intervals, the lower extremities. The subjects of this grade of the disease appear generally dejected, become emaciated, and wear more or less the rueful countenance. It is extremely difficult to prevail on them to submit to the use

of emetics, fixed air, and the other remedies, particularly blisters, heretofore recommended to cure this variety of fever, sufficiently long to afford them complete relief. This is the same disease which generally passes under the name of chronic rheumatism, and which some people carry about them during the greater part of their lives. The grade of fever in this form of disease preserves its character with more pertinacity than any, either in the winter or summer epidemic, and is not, like such grades of fever when passing under some other name, apt by any treatment to be made to change its character ; it is typhoid for months and years, and remains so as long as the disease lasts. Where, however, the patient can be prevailed on to use emetics, fixed air, blisters, and assafœtida, as has been already directed, this form of gout may be certainly cured. But females generally want resolution to pursue the plan long enough, and resort to coffee, to laudanum, or to the pipe, as a remedy sure to afford them partial and temporary relief.

In the typhus grade of fever the gout more frequently appears than in both the other varieties together. In populous and crowded cities, where the miasmata arises principally from the

decomposition of animal matter, this is particularly the case. Hence we find the chief reliance of Dr. Cullen and the medical writers of Edinburgh and London have been placed on "throwing in" large quantities of the bark, in the intermission or remission of the summer epidemic. Its attack commences generally a little before day, when the system is in the most debilitated state, with pain in some part of the body, but most commonly in one of the feet. The pain produces great restlessness and indisposition to sleep, some chilliness rather of a chronic nature, and the fever is not clearly developed in several hours. When, however, it is excited by the painful irritation of the affected part, the pulse is frequent, quick, and weak, with thirst and a restlessness peculiar to this grade of fever when it appears in the form of a regular intermittent or remittent. The first attention of the physician should be to relieve the pain, which is either more acute than in either of the other varieties, or the patient, from an excessive morbid sensibility, is less able to bear it. Nothing will have this effect so speedily and certainly as a strong anodyne of opium or laudanum, with hot fomentations of the flowers or leaves of the poppy. Hot fomentations of the

bitter herbs generally, or hot water alone, with the aid of the anodyne, soon make the patient more comfortable, and he is apt, as most persons are who have been suffering much pain, on an abatement of it, to fall into a sleep of some hours' continuance.

Each variety of gout, and more particularly this, like the intermittent of which it is but a disguised form, has regular exacerbations and remissions of pain. It is, however, in gout of the typhus variety, no more necessary to wait for the intermission to exhibit the quinine, on which I rely as the principal medicine to cure it, than it is in the common intermittent, or remittent fever, of the same grade. As soon therefore as the patient becomes composed, I would recommend the general treatment to be conducted on precisely the same plan as has been already recommended in the cure of a common intermittent or remittent fever of the same grade of action. The only difference in the result will be found that, in the disease now under consideration, the plan must be pursued longer, but it will be in the end equally certain and effectual.

The anodyne should be repeated at the com-

mencement of each paroxysm, for with it returns great restlessness and irritability. As soon as the pain and tenderness in the part affected will bear it, the warm fomentations may give place to frictions with a flesh brush, or a warmed hand, covered with some warm stimulating liniment. The volatile liniment with laudanum, the camphorated liniment, the anodyne balsam, or a liniment composed of equal parts of spirit of turpentine, and the water of ammonia, may be used as may be most convenient to the physician or family. After a friction, as long as it may be agreeable to the patient, or convenient to the nurse, has been used, the limb (if the pain is there seated) should be rolled in a spiral roller, with a proper degree of tightness, sufficient to sustain the muscles, but not so tight as to increase the pain or check the circulation of the blood. This bandage should be removed night and morning, the friction repeated, and the bandage replaced. As soon as the patient can bear his own weight on his legs, he should be induced to walk ; it increases the strength of the muscles, promotes circulation in the diseased limb, and imparts vigour to the whole system. The

cure will be completed by a moderate continued use of the quinine, with riding on horseback, or in a carriage, in a purer atmosphere.

It will be proper to observe that persons subject to gout, are sometimes attacked with regular intermittent fever, and that the fever in that form generally terminates, after the first or second paroxysm, in this grade of gout. In such cases the treatment is precisely the same, and should not be changed because the name of the disease may change, since the change of name has produced no change in the excitement of the system, and where the disguised and plain intermittent alternate, as they frequently do in gouty persons, the remedy to cure both will be found in the quinine. Where the quinine has been used for several days, assisted, as it always must be, in its stimulating effect by the pain, which is the prominent symptom of this disease, the system has, I have remarked, occasionally risen above the typhus point, without becoming free from the disease; in all such cases which have come under my notice, health was soon restored by a discontinuance of the quinine, and by administering of calomel grs. 10, rhubarb grs. 2, in a powder, or in two pills.

The bark, or this improved and condensed form of it, has not heretofore (as far as my reading extends) been freely given by any physician in what he may have considered gout proper. Yet Sydenham, and many other distinguished writers, have not hesitated to prescribe the bark freely, and to rely on it in the cure of what they called rheumatism, and which, according to the best views which I have been able to bestow on the subject, is, in origin, in locality, in form, and variety of fever, precisely the same disease, requiring, under the same variety, the very same treatment in every respect whatever.

The celebrated powder of the Duke of Portland for the cure of gout, was composed of several bitter ingredients, among which gentian, and the lesser centaury, are still retained in the *Materia Medica* as useful articles in the cure of intermittent fever, and will yet, without doubt, be serviceable in this species of gout, but it must be superseded by the quinine, as well on account of its more certain efficacy as its more easy exhibition.

Dr. Rush, in his treatise on gout, has recommended particular remedies for the cure of various complaints referred to gout in its pro-

teus form ; most of those complaints enumerated by the Doctor seem, in their effect, to be not sufficiently violent to produce constitutional disease, and where that is the fact, his remedies may be very appropriate, for a full account of which the reader will please consult his works.

Where, however, the local affection is such as to produce secondary fever, a more certain and professional plan would be to make the remedies, as well general as local, correspond to the state of excitement. Thus, I have seen asthmatic gout, after refusing to yield to the common prescriptions for asthma, give way readily to quinine and wine.

The same author (Rush) says "the arthritic gonorrhœa should be treated with the same remedies as gonorrhœa from other causes." My own experience has not justified such practice. In all cases of arthritic gonorrhœa, which have been noticed by me, the disease has been accompanied with inflammatory fever, where injections, and the common remedies for the cure of gonorrhœa have been used, the running suddenly ceases, the local inflammation is transferred to the neck of the bladder, which becomes severely afflicted ; the febrile symptoms are increased, with great irri-

tation in the part now locally diseased, and inability to retain, except for a short time, the urine. This disease, I presume, is the same called, (I think) by Sweadiaur, the "dry gonorrhœa."

The only remedies with which I have been able to cure it, were such as were recommended to cure the inflammatory species of gout. First, calomel in large and repeated doses, at proper intervals, followed by Epsom salts, free use of diluting drinks, absolute rest, and low diet. After the general excitement shall have been removed by this plan, the local symptoms will in most cases abate, or may be removed by a free use of cubebs. Injections do more harm than good; where the local irritation continues, after a full trial of the plan here suggested, I have always found a blister applied to the pudendum, produce entire relief.

I shall conclude this article, and with it this treatise, by a quotation from Dr. Rush, to whom I am indebted for most of my principles in medicine. "I have enumerated the principal remedies for curing the gout. Most of them are to be met with in books of medicine; but they have been administered by physicians, or taken by patients, with so little regard to the different states of the system, that they have in

many instances done more harm than good. Solomon places all wisdom, in the management of human affairs, in finding out the proper times for performing certain actions. Skill in medicine consists, in an eminent degree, in timing remedies. There is a time to bleed, and a time to withhold the lancet. There is a time to give physic, and a time to trust to the operations of nature. There is a time to eat meat, and a time to abstain from it. There is a time to give tonic medicines, and a time to refrain from them. In a word, the cure of gout (as well as primitive fever) depends wholly upon two things,—*proper remedies*, in their *proper times and places*."

ERRATA. In page 80, line 16, for "*congers*" read "congero."

THE END.





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